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'Law cannot deal with computer fraud' — police

THE law and rules of evidence are not always capable of dealing with computer fraud, according to Inspector Norman Collineau of the Greater Manchester Police.

Addressing delegates at the National Computing Centre's conference on computer crime, he cited the Bank of England case where the judge felt unable to admit a computer printout as evidence.

Frank Hooper, president-elect of the British Computer Society, said DP managers would be forced to pay more attention to the security of their systems.

He told the delegates they were unlikely to get security from "packages dreamt up by someone for somebody else's application" or what was intended as a panacea for 20,000 other business applications.

Hooper accused analysts and programmers of excusing in technical self-gentleman, and said they designed systems as an outlet for their creative impulses.

"I see no room for creativity in DP. The work must be done according to specific rules and specific standards. There is no room for artists when you need artists, no room for virtuosos when you need players," he said.

Datapoint to buy TRW network

BY 1983 distributed processing systems manufacturer Datapoint will directly own and control a substantial marketing force in Europe. The company has agreed, in principle with TRW, its major distributor outside the US, to buy TRW's network of ten country distributors, seven of which are in Europe.

In addition, Datapoint expects to complete its acquisition soon of Inforax, including the ailing key-to-disk supplier's substantial marketing and support operations in Europe.

TRW, which the engineering giant acquired in 1970 when Datapoint was a much smaller company, expects in 1983 and the deal transferring control to Datapoint is expected to be completed by July 1981.

Low-cost SID to be sold by Swift

SMALL banks can now gain access in the Swift interbank funds transfer network using the ST100, a terminal system costing little more than \$14,000. The ST100 will be built by Texas Instruments and, unlike the existing Swift Interface Devices, which cost up to \$100,000, it will be sold by Swift itself.

The ST100 was announced in Copenhagen last week at the third Swift International Banking Operations Seminar, Sibos 80, which was attended by about 1,000 banking experts from all over the world, including 140 from the US and 120 from the UK.

Swift has estimated that there are 450 potential users of the ST100 and 200 machines have already been ordered by Swift from Texas in the US. Each will come with a 64K-byte DS990 Model 2 processor, which is based on the 16-bit TMS 9900 chips, two 1.2 megabyte floppy disk drives, a 75 clips bi-directional printer and one VDU.

Software will consist of Texas' DX5 operating systems and applications programs being developed by Swift itself in Pascal on a

DS990 Model 4 development system with 256K bytes. The Model 2 cannot hold the Pascal compiler.

The ST100 will provide the same basic data entry and verification facilities as a SID, but without the throughput offered by multiple VDUs.

The two main SID suppliers have been Burroughs and General Automation.

In operation an ST100 will be linked to one of the Swift switching centres via a high speed data concentrator. It is designed to handle up to 1,000 messages a day.

New UK Cobol for US Govt

THE United States Library of Congress has bought a British product, the Alpha Cobol compiler, who was to have kept both posts until the end of the year will retain only the chairmanship.

"They just rang us up and ordered it," said Alpha Cobol's author, Tony Sale.

Alpha Cobol was released in July by Computer Applications Research, which claims it is the first micro Cobol "compiler compiler". The system accepts Cobol Meta language in machine readable form and the compiler produces code for a pseudo machine, which is then interpreted at run time.

At present it runs on the Alpha Microsystem (on which it is said to compile at 400 lines per minute).

The Alpha Microsystem is based on an enhanced version of the Western Digital 1.51-11 chip set.

The product was developed commercially in competition with the other versions of Cobol for micros that are currently available: Zilog's for Z80s, MicroSoft's Cobol 80, and the two British contenders, MicroFocus' CIS Cobol and CAP-CPP's MicroCobol.

Sale thinks that Alpha Cobol has the advantage over MicroCobol of being 1974 ANSI standard, and against the standard CIS Cobol has been heavily over-subscribed despite doubling the original.

Report — Page 3.

NEWS IN BRIEF

Takeover at the top

CHAIRMAN and chief executive at Burroughs, Michael Blumenthal, is taking over the latter post three months early. The previous incumbent, Paul Mirribito, who was to have kept both posts until the end of the year will retain only the chairmanship.

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French buy

FIRST sale of the Micro Focus CIS Cobol compiler to run on a minicomputer has been made to CMC France. The data entry and business systems specialist, owned by Rediffusion of the UK, wants it to run on the CMC 760 data entry and local processing system, which is built around the Digital Equipment PDP-11/34.

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Training body

FOLLOWING talks between the Manpower Services Commission and the Computing Services Association, it is likely that any industry training body will be a voluntary council rather than a statutory training board. The latter would involve service companies and DfP departments paying compulsory levies to the board.

SEYMOUR Gray, founder of Gray Research, is stepping down as chief executive of his firm to devote more time to research. He will be succeeded by John Rollwagen, the company's existing president.

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Report — Page 3.

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LETTERS to the EDITOR

COMPUTERVIEW

Japanese traffic is still one-way

IFP this week has been the biggest international computer gathering ever to take place in Tokyo, and following the show it is likely that thousands of informatics who made the trip for the first time will decide that they have to add Japan to their regular itinerary.

So far, Japan has no annual international computer show which demands to be added to the international circuit that presently embraces the NCC in the US, Hanover, Sicily, and Compec at Olympia.

The reason is not difficult to find: computer industry trade is largely a one-way traffic out of Japan and into the rest of the world. Until very recently, only IBM had a wholly-owned subsidiary in Japan; it was one of those strange arrangements akin to the one whereby IIT had a subsidiary in West Germany throughout World War Two. But any US manufacturer had to form a joint venture with a Japanese company.

US companies provided the licences which got the Japanese mainframe industry off the ground: Hitachi got RCA Spectra licences, Toshiba went to GE, Nippon Electric to Honeywell, and Mitsubishi to Scientific Data Systems, which became

Xerox. Only Fujitsu developed an original Japanese line of mainframes.

In the past two or three years, US companies like Data General and Burroughs have taken advantage of a relaxation of Japanese policy to buy their Japanese partners out of the joint ventures, and Honeywell has stepped up its direct marketing in Japan.

With the announcement of the Acos 77/1000, Nippon Electric has unequivocally declared the pre-eminence of Japanese large-scale mainframe manufacture: the specification of the machine makes it as powerful as anything IBM is likely to produce in the H-series, and all the evidence of Fujitsu's and Hitachi's IBM-compatible M-200 machines is that they are far from being paper tigers: they work to specification and are substantially more reliable than anything coming out of the US industry.

BETTER late than never, British Telecom's Packet-Switched Service has begun limited operation from nodes in London, Reading and Bristol. It would be very British to treat it as not a great new opportunity but simply as another service.

Spurred by the full operation of Transpac and Euronet, and in the belief that information is power, the French government is giving financial backing to companies de-

veloping public access database services which can be sold around the world.

The UK remains one of the biggest repositories of human knowledge in the world, and PSS coupled with the International PSS provides the highway over which to disseminate that knowledge. The product, the distribution medium and the market are all there. All that is in doubt is the will to invest.

By Claire Gooding

IFP the good news: British software is represented at the world's first show for packaged software. The bad news: Insac's stand was undoubtedly the barest there.

Full marks to Insac for being at Software Info, held in Chicago, at all. And credit to them for getting American salesmen to sell British software. But they were

obviously in need of a US-sized budget to do the job.

Already handicapped with a new name which means nothing in the US, Insac's salesmen are also battling against typical British reticence when it comes to spending on advertising. "We've got software here as good as anything else on show today," said an Insac salesman. "Everybody you speak

to knows the name Altergo, for its TP monitor Shadow, but Insac doesn't mean anything here — and it won't unless we can advertise."

All this is about to change however, and Insac's very presence at Software Info is a good sign for the future. Insac has just revealed that it is about to start an aggressive campaign to get its name known and market its products in what president Peter Dine termed "a second British Invasion of America".

Japanese may buy IBM

IN an effort to ward off strong foreign criticism that it only buys Japanese, the PTT Nippon Telephone and Telegraph has announced that it is negotiating to buy items from IBM's 5200 low-cost data entry terminal system. It wants to have one in telephone billing. IBM confirms that it talked to NTT about it. It would welcome NTT as a customer. Talks on cross-licensing of technology between NTT and IBM are at an early stage.

Sharp stops service

AFTER complaints by a European telecommunications authority, believed to be West Germany, that it was contravening internationally agreed regulations for telecommunications, IF Sharp, the Toronto-based APL timesharing bureau, has announced that it will stop running its widely advertised terminal-to-terminal message switching service from January 1.

Some IBM watchers in the UK believe that IBM will also cut purchase prices on 303X machines in order to overcome the sales resistance of customers who think that H is just around the corner.

In addition, a cut in 303X prices is also seen as necessary to sustain sales after the launch of the price performance competitive 4341-2.

New York industry analyst, Gideon Gartner, believes that 303X price cuts could also be needed to

Pupils flock to Honeywell course

OTHELLO and Space Invaders are two of the games being used as teaching aids in Honeywell's new evening course in Computer and Logic Appreciation for Secondary Schools (CW, Sept 4).

"We're fortunate," said Youens, "in having most of the educational material already prepared for our commercial courses. It just needed to be brought up and re-located."

Selection of the students was left entirely to the individual schools, but though no previous knowledge of computing was assumed, a certain level of motivation and ability was stressed as necessary.

"You will need some stickability," said Youens.

In the 40 weeks Class will cover a multitude of topics from input and output media, through programming database systems, specification analysis, and data editing, to writing several separate programs.

The main teaching emphasis will be on Cobol and Basic, with an introduction to others such as Fortran, RPG, Coral and Assembler. Successful students will be given a certificate.

Insac tries to make mark in US

By Claire Gooding

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Following the purchase of Al-

tero Inc in the US and the Cali-

fornia-based Global Data Corp,

the group is pursuing plans to get a

foothold in the minicomputer soft-

ware market through Insac Pro-

ducts Inc.

Insac is about to change its ad-

vertising agency and spend more

on catching the eye of US buyers.

And next year, Insac salesmen

won't be fighting to get a carpet on

their stand at Software Info. "Next

year," said one of them, "we'll

take this exhibition as seriously as

it deserves to be taken."

In the UK, the 303X machine and

all 4300 models are excluded

from a broad range of price in-

creases. Purchase prices of most

products launched before January

1980 are up 5%, while rentals and

licensed programs go up 8%.

Maintenance charges are adjusted

over a spread of -5% to +10%,

and other services rise between

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Downtime

by Chad

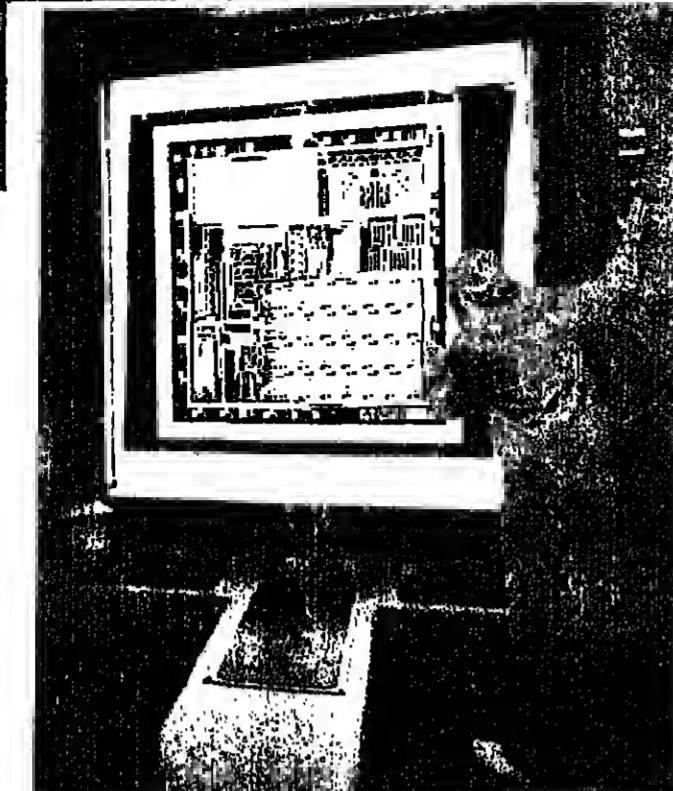
This recession isn't working!

RECESSIONARY THOUGHTS: I cry, trying to ring up a computer company that has just sacked a whole lot of graduates: "Why the blazes didn't these people answer the phone?"

Wryly replies my colleague Tim Palmer: "Because they've tried the telephone."

It turned out they had moved offices, and are not really in any danger of going out of business. By the way, you needn't imagine just because there is a recession you will be able to get your next phone or your car fixed any sooner than usual.

So you're offering them money? You can't expect en-



I suppose it was inevitable that sooner or later Ken Russell would make a film about microchips.

GILB'S MYTHODOLOGY

Make simplification into a formal goal

IN the data processing business, we are, as an international professional group, terrible at making any clear formal goal statements for any of our projects. So I should really make this suggestion in two steps:

First, have clear measurable goals before undertaking any important system development activity. Then among these clear measurable 'goals', should be goals which directly encourage simplification.

"Getting the functions to somehow work as early as possible" becomes the order of the day.

Risk level

Attribute considerations which might lead to several desirable types of simplification, seem to get shoved aside in the panic of the complex functional requirements planning that follows. The simplification concept of evolutionary delivering the system, and identifying functional needs in detail at a later time, is too rarely a conscious process. We seem afraid of doing this, because we lack professional insight into how to control such an evolutionary

process.

One specific attribute which can be achieved by selection of a suitable design strategy or technology is the acceptable risk level. Obvious as this factor is, I find that it is too rarely treated directly by management and technologists who are discussing a new system design.

"Go on, take a look at the systems documentation on your desk, and try to find an explicit 'acceptable risk level' specification."

Try asking the project leader what it is, or ask the main user/client representative. It won't be easy.

Yet if it is specified clearly, then the designers will be motivated to find 'simpler' solutions, because these will, by their visible nature, tend to remove some of the risk elements from the system.

In practice, a risk level can be stated as an overall system parameter: "The system shall be designed so that no attribute upon delivery deviates by more than 10% from the planned level."

Guarantee

Or it can be expressed in the form of a "worst-case" specification for each attribute. For example, planned delivery time by Jan 1, worst case by July 1. What happens if I change the worst case to by Jan 15? Obviously I have less freedom to be late. I must find a surer way of delivering the system.

This pressure to plan a low risk system might lead me to consider dealing with an outside supplier who is willing and able to guarantee these dates; even at a higher cost. The pressure might lead you to consider getting some kind of ready made system, rather than building the more customised version which management have now told you they are not willing to wait until July to get.

Options such as contracting with a supplier who will guarantee, or getting ready-made systems, are really simplifications. They remove the uncertainty of the less simple process of building it yourself, or letting a supplier loose without accepting a commitment to be finished near a given date.

Applying this principle of attribute specification to a different attribute in a typical data processing system can be illustrated further with User Simplification. Most of us would probably pay lip service to the goal of making things easy for the final user of the system. Yet can you find this hukable goal as



Tom Gilb is an independent consultant, lecturer and author on computing topics.

of your systems? Have you ever had to pass an acceptance test where the learning time and productivity of the user had to meet certain levels, not just the 'response time of the computer terminal'?

The following goal idea prototype out on your own system: No presently employed user shall need more than one day on the job to reach solo capability on the terminal, nor more than three weeks to reach a productivity of 300 transactions per five hours' constant work.

Now to reach goals like this you will have to simplify the system from the point of view of the user. This may complicate the programming and design—but that is our job, so don't try to escape it by putting the burden on the user. Goals such as the above should lead to simple mnemonic codes, natural procedures, indexes by keyword in the user handbook, online help facilities and other simplifications for the user.

Gilb's hypothesis: if management really want to achieve system simplification, then they must communicate the underlying reason in the form of a clear system attribute specification. Failure to do this will result in overcomplex systems, and this is a management failure.

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I-told-you-so department

Management

CHAD is smirking all the way round to the back of his head this week, following last week's Downtime piece about so-called spelling checkers on word processors. Some friends at the Polytechnic of Central London have sent me a letter they have

lightened non-materialistic business men to be interested in that! A friend who is moving house has told her she won't be able to get a phone until late nineteen-thirty-five. This is clever.

The way it works is this: in times of boom, the PO explains, "There are so many people who want phones we won't be able to get you one for yunks." Then when there's a recession they say, "The PSBR has been cut back so we won't have any money to spend on giving you a phone for yunks."

One of this is a valid word which the checker could not possibly find, but the others, as you can see, are words that you

would find only in a most peculiar dictionary.

For good measure the letter adds one syntax error and one punctuation error, together with an example of one of the most strangulating pieces of clumsy construction I have come across in a month of Sundays.

There is of course no automatic checker for these yet, but doubtless someone in Armonk is

heavering away to produce one, so that future letters can have five of each error instead of just one.

Received from none other than IBM, exhorting them to buy the new Displaywriter WP.

One of the most splendid features of this machine, the letter says, is the wonderful spelling checker. You'd better believe it. The one-and-a-half page letter contains no fewer than five spelling mistakes.

One of these is a valid word which the checker could not possibly find, but the others, as you can see, are words that you

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This information was part of the mass of facts and figures picked up by the Greanias from the Post Office Engineering Union.

He has just returned from more than a month visiting US institutions, mainly in the telecommunications field, under a travelling fellowship awarded by the Winston Churchill Memorial Trust.

IBM experts disagree about the exact form of the office of the future. The marketing staff appear to favour the alphanumeric keyboard as an acceptable device for interacting with the system. But some of the research people believe that managers will not come to terms with the keyboard and will demand some form of electronic writing tablet.

Greanias said that a handwriting input system was under development at Yorktown Heights involving an electronic pen and writing tablet.

But Darlington gathered from the Greanias that the system was still very much at the conceptual stage.

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Traditional

JBM laid on a set of presentations for Darlington personally at its Yorktown Heights offices, including a talk by Egon Greanias, one of IBM's lifetime fellows. Greanias is manager of the advanced office applications sector at Yorktown Heights and the message he put over in his talk was that the office of the future will have to be as compatible as possible with traditional office procedures.

IBM marketing people present at the meeting doubted if the system conceived by Greanias could ever be sold successfully.

At the moment there are systems like the Quest Automation Micropad that can recognise individual and carefully formed letters and numbers and some sophisticated OCR systems that can read handprinted alphanumeric if they are written with care. But there is no system anywhere near the marketable stage that can read the freehand writing of any individual.

IBM has a system at Yorktown Heights that can recognise contin-

uous speech, but only after it has been extensively "trained" to follow the speech patterns of the individual talking to it (CW, April 17).

That system was also discussed in the presentation and IBM made it clear to Darlington that it required a lot of computer power to support.

Voicebank

Darlington's tour of the US also took in Voicebank Delta, the telephone answering service owned by Exxon subsidiary Delphi, whose Delta 2 system is to be manufactured in the UK under licence by Nexos.

Darlington visited the first Voicebank centre which is in San Francisco and was told that the second would start operating in Los Angeles in the spring of next year.

The San Francisco centre now handles 24,000 calls a day for 4,000 customers.

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Incredulous

Darlington said that the other IBM people at the presentation reacted to what Greanias had to say with incredulity and views were expressed to the effect that managers would be prepared to live with the keyboard.

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That system was also discussed in the presentation and IBM made it clear to Darlington that it required a lot of computer power to support.

High priced

This information was part of the mass of facts and figures picked up by the Greanias from the Post Office Engineering Union.

He has just returned from more than a month visiting US institutions, mainly in the telecommunications field, under a travelling fellowship awarded by the Winston Churchill Memorial Trust.

Traditional

JBM laid on a set of presentations for Darlington personally at its Yorktown Heights offices, including a talk by Egon Greanias, one of IBM's lifetime fellows. Greanias is manager of the advanced office applications sector at Yorktown Heights and the message he put over in his talk was that the office of the future will have to be as compatible as possible with traditional office procedures.

IBM marketing people present at the meeting doubted if the system conceived by Greanias could ever be sold successfully.

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<h3

PAGE SIX for programmers and analysts

by Pamela Rowe

Best-selling micro manual



Dual attack speeds up development



"WE sold our in three or four days. Couldn't get any more for love or money."

"Just let me have the books," pleaded bookseller Vincent B. Coen. "I can sell as many as I can get."

What was this? Fanny Hill or the latest Forsythe? No, a handbook on a micro operating system that in the US is rivalling fiction sales. The author, Rodney Zaks, is well-known both for his previous titles and as the managing director of the Sybex publishing company based in Berkeley, California.

Zaks acknowledged, "I have a love/hate relationship with that particular book. It is lovely that everyone is shouting for orders but I hate that we printed only 45,000 and they're all sold. In fact they were all sold in the first few weeks."

No gamble

The point was made that the print run was determined by pre-publication orders, so that Sybex had taken no gamble at all.

"That is true," said Zaks, "and we got it wrong, that's all. I wish we'd printed more." He smiled. "This is not a common problem in publishing; ordering a greater print run is easy. A more usual problem is that it takes two years to produce a book, and in computing by that time it is out of date. Also traditional publishers do not understand computer technology."

"We try and run the company like an efficient electronics outfit. Each department processes its part of the operation to a strict schedule. I think from inception to mass-production the CP/M Handbook took only one year."

What of future titles - were there any plans for any more blockbusters? Zaks replied:

"We plan to produce a title a month. Some of those soon to be released are two titles on Basic, one teaching Basic through games and the other on exercises concentrated on improving style; and two titles on Pascal."

"The CP/M Handbook, Rodney Zaks, Sybex. Available in the UK at £8.95."



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SOFTWARE FILE

One of the big problems for those trying to market software imaginatively is that it's invisible. This week Software File takes a look at the world's first show devoted to software packages, held in Chicago, and tries to answer everybody's first question: "Just how do you put software on show?"

The event was the brain-child of Ken

Burroughs, who organised the conference program to run concurrently with an "exposition" of products at the Hyatt Regency Hotel. Software Info was backed by the Chicago-based magazine Infosystems, whose publisher was convinced, by the volume of software inquiries he received, that the industry was badly in need of such a show.



So how do you show software?

CHICAGO, one of the main convention centres in the US, hosted the world's first show devoted to computer software.

The rationale behind Nomad is that, as hardware becomes cheaper, and people more expensive, the accent is on saving user time and therefore money, rather than worrying over machine efficiency.

So that manpower problems have a greater emphasis than machine statistics.

"A guide to Nomad for application development," Daniel McCracken, National CSS, Wilton, Connecticut, \$14.95.

the things that pleased exhibitors was that every visitor was a potential buyer.

Some relied on a display of brochures and plenty of advisers on the stand to answer inquiries. Others gave video shows explaining their products, and a large percentage had terminals on the stand to demonstrate online products.

There were a few gimmicks about. Software AG had a miniature putting course, Allen Services had a magic show, and one stall was giving away popcorn. But there was very little razzamatazz.

The aisles were full but not crowded, and the atmosphere was studious, more like an art gallery than a fairground. In fact, one of

visitors vied the wares on show at the world's first exhibition of packaged software in Chicago. On the right is

ENCOURAGED by the response to Software Info, plans for a similar event for Europe are becoming firmer, with many US exhibitors already interested. It will probably take place in spring 1981, in Paris, following the same pattern of conference combined with exhibition.

European event planned

Exhibitors approve of show for buyers only

THE "exposition" part of Software Info lasted three days, starting a day before the conference part and finishing a day earlier.

The most often heard comments from vendors were . . . "Too much mini and micro stuff - not enough emphasis on the mainframe products . . . The show should have been better advertised beforehand . . . There should be more systems software." But exhibitors were on the whole impressed with the "quality of buyer" and keen to take part in another event on the same lines.

At the moment Nomad is available in the UK on a time sharing basis. In the US, it can also be run by the user in-house on an IBM-compatible microcomputer, the V32, supplied by National CSS. According to McCracken, the V32 is intended for use primarily by non-DP professionals like accountants and project managers. But McCracken also sees the programming speed it offers proving useful to DP specialists who want to be able to demonstrate the bare bones of a system to the user department to check that it meets its requirements.

Commitment to the full-scale programming job need only start when the system fits the bill.

Programming of the final system could be in Nomad itself or in

the user department to check that it meets its requirements.

Although there were over 4,500 pre-registered applications to attend the show, many more people turned up at the last minute, swelling the numbers to over 5,000.

While the aisles were far from full on the first and last days of the show, the middle day, Tuesday, saw an enormous crowd, with staff on the stands permanently occupied with queries and demonstrations.

A canvas of opinions among exhibitors on the last day revealed

strong approval of the idea of a software show, and a universally high opinion of the kind of person who visited. Many commented that they would prefer it to stay that way - limited to genuine buyers who already knew their area of interest, and closed to students and "coasters" who come

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PEOPLE and EVENTS

ICL reorganises world marketing

It has made several changes in its worldwide marketing. Peter Ellis, deputy managing director, becomes responsible for the Worldwide Marketing Group, reporting to Dr Clitus Wilson, the ICL group managing director.

Reporting to Ellis will be Les Cole, who becomes executive director, responsible for the central direction of operations of ICL's major subsidiaries in Australia, France, Germany, North America and South Africa. A separate Services Group is being



An ICL 7700 Information Processor, installed at the British Enterprise Exhibition, gave the visitor information on all exhibits, either on a video screen in response to specific questions, or in the form of a letter produced by the correspondence-quality printer. Our picture shows James Prior, Secretary of State for Employment and Mrs Prior, looking at the 7700 at the opening of the exhibition at Simpean (Pleasden).

Marcol award winners

MARCOL has made its annual awards, to five members of staff who have shown outstanding achievement.

Clive Brooke, technical manager of Marcol's Transition, Consultancy and Systems Division received an award for outstanding technical contribution for his work as senior technician on site at BP Chemicals South Wales.

Merit Award of the Year went to Anne Kennedy, training officer, with the company's Hotel Systems Division.

The Sales Achievement Award was presented to Kevin Sullivan for his new business success resulting in an overall profit gain of 40% in his sector.

John Kelly has become sales engineer with Dicrol, after three years with the company.

Gerald Nimberg has been appointed manager of online databases for Auerbach. He has had 13 years' experience in the data processing industry.

Ian Glaser has been appointed by Redifox Computers as Southern Region support manager. He joined the company in 1978 as branch support manager.

Planning Research Corporation International UK has appointed Peter Ward software products manager. He was formerly a director of Adserve-SMI.

EDS 80

NASHUA 80

It's love at first byte

What is it that makes Nashua storage modules compatible with so many systems. The answer's simple.

Nashua's exclusive 'Error Correction Classification'. A programme that enables you to pick the module that matches - precisely - the error correction capabilities of your controller. And this big benefit applies to our 40, 80 and 300 Megabyte packs.

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Please send me full information on your Error Correction Classification Programme, and your 4463, 4464, 4473 and Trident range.

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NASHUA

Computer League results

THE 1980 Computer Football League summer session has now ended and trophies and medals will be presented aboard the MV Nutria on the Thames next Thursday, October 16. Presentations, a disco and buffet, take place between 8.00pm and midnight. Tickets are available for £5 from 31 Crescent Road, London E18. Cheques should be made payable to the Summer Computer League.

SUMMER COMPUTER LEAGUE TABLES

Division One		Division Two		Division Three		Division Four		Division Five	
P.W.D.I.	F. A. Pts	S.I.I.	U.S.C.L.	B.A.C.	10 6 2 2 6 10 30 6	S.I.I.	H. 5 2 1 28 13 12	A'badne	10 2 2 6 10 30 6
10 8 2 0 42 5 18		U.S.C.L.	8 5 2 1 28 15 12	S.I.I.	10 7 0 3 29 22 14	Sheppard	10 1 2 7 9 33 4	Sheppard	10 1 2 7 10 40 4
10 7 2 1 31 9 16		N.C.R. II	8 4 2 3 25 22 4	Ventec	10 5 1 4 35 36 11	U.S.C.L.	10 1 2 7 9 33 4	U.S.C.L.	10 1 2 7 13 39 1
10 4 1 5 20 28 9		Logico	8 2 0 6 11 31 4	Judyn B'	10 3 4 3 25 21 9	G & Diffus	10 4 1 5 26 35 9	G & Diffus	10 4 1 5 26 35 9
10 3 2 5 21 24 8		Camp. Sys.	0 0 0 0 0 0 0	C.J.I.I.	10 1 8 13 39 1	C.J.I.I.	10 1 8 13 39 1	C.J.I.I.	10 1 8 13 39 1
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Hoskyns 6 2 1 3 16 21 5

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Training scheme may be voluntary

A VOLUNTARY training council for the computing services industry to take the place of a statutory industry training board looks likely to be set up, following discussions between the Manpower Services Commission and the Computing Services Association (CW, October 2). The scheme would save service companies and

the DP departments of user companies from being drawn into the compulsory training levies and other arrangements involved with statutory boards.

Government support for the training council would be provided, probably of the order of £45,000 for three years, to get it started. Firms would pay for the

individual courses their staff attend. The co-ordinating body is expected to include representatives from the CSA, the BCS, and the IDPM.

The difficulty with computer training under the existing training board scheme is that so many computer staff work for user companies which already have to pay compulsory levies, for instance to the Engineering Industry Training Board.

The idea for the voluntary scheme was enthusiastically received at the CSA's annual general meeting, at which Alan Thomas of Data Logic was elected president. The new vice-president is Roger Graham of BIS.

The scheme is called Prestel

and, as well as preparing for future enhancements to Prestel, it exists to show potential foreign customers that not only can Prestel do anything its rivals can, but specific methods have been developed to do it.

The parallel attribute coding used by Teletel enables the colour, size and other attributes of the

Anything you can do...

ADVANCED versions of Prestel systems, which include the ability to convert from the French Teletel and Canadian Telecom coding standards, are running experimentally at British Telecom's Martlesham Research Laboratories.

The scheme is called Prestend and, as well as preparing for future enhancements to Prestel, it exists to show potential foreign customers that not only can Prestel do anything its rivals can, but specific methods have been developed to do it.

The parallel attribute coding used by Teletel enables the colour, size and other attributes of the

display to be changed for each character as it appears, while Prestel uses control characters which occupy a space on the screen each time they are used.

When this capability is implemented in Prestend, the information can still be sent to a standard Prestel terminal and produce a sensible display: that is, the text itself is not destroyed. This is also true of Picture Prestel, which enables part of the screen to contain a colour photograph retrievable from the database, and of the high resolution graphics using dynamically redefinable character sets (CW, April 3).

Addressing the CSA after the meeting, Peter Benton, managing director of British Telecom, blamed the backlog of the supply of communications lines on the disturbance caused by the ending of the pay freeze in 1978, but assured members he had plans for a timely service by 1982.

Hobby club to go on Prestel

NORTH London Hobby Computer Club is to become an information provider on Prestel and publish telesoftware as well as details of club meetings. It plans to use the Prestel pages of Practical Computing, which in turn publishes through IPC Viewdata.

Menus on Compuserve

MENUS and household advice from the magazine Better Homes and Gardens are to be made available online to users of Compuserve Information Service, the US time sharing service for hobbyists that already provides online news (CW, July 24). Users will also be able to order a range of computer-related books from their home terminals and pay for them by credit card.

The menu will include costs and nutritional information, and there will also be advice on garden-

ing, decorating, crafts, travel and money management. One month's issue will be held online at a time, on Compuserve's bureau in Columbus, Ohio. Eventually news from 11 different daily papers throughout the US will also be available in CIS's 4,000 subscribers.

Anyone with a standard terminal or home computer with communications facilities can access CIS via dial-up, paying \$5 an hour for connect time.

OUR COMPUTER SYSTEMS WILL SOON BE RIGHT UP YOUR STREET.

LONDON

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14-16 October

BIRMINGHAM

Albany Hotel 28-30 October

MANCHESTER

Portland Hotel 3-5 November

LEEDS

Selby Fork Hotel 11-13 November

EDINBURGH

Caledonian Hotel 17-19 November

BIRMINGHAM

(Which Computer Show) N.E.C.

25-28 November

BRISTOL

Unicorn Hotel 9-10 December

Few businessmen enjoy travelling or staying away from home, even to attend important exhibitions.

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It promises to be one of the most exciting demonstrations of office automation ever mounted. Use the coupon to send for your free invitations.

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Please send me invitations to your Roadshow. I cannot attend, so please send me a full product data pack.

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ventek
COMPUTERS

Chips help for non-NY banks

CHIPS, the New York system that handles transactions between clearing banks, is being enhanced to enable US dollar transactions involving banks outside New York also to be cleared the same day. The banks benefiting from saving a day's interest will be foreign as well as US based.

At present transactions between New York banks go through the clearing house fund, while non New York banks are covered by the so called Federal fund.

Under the new system, scheduled to go live in October 1981, all transactions will go through a single fund — a facility known as one fund clearing.

The new facility was announced last month by John Lee, executive vice president of the New York Clearing House Association, the organisation that runs Chips.

Speaking to a record attendance at the Hampshire branch of the BCS, he said that BCS membership should be considered as offering proof to employers of some technical expertise, if not necessarily the particular skills needed for a particular job.

In reply to criticism that no other professional society stipulated re-testing of members, Bogod said that computing moved so fast that it was necessary for members to show they had kept up with the mainstream of developments.

He recognised that this might mean the loss to the society of those members who moved into more general management roles.

Outlining the value of membership, Bogod said that "MBCS" currently stood for all the qualities expected of a professional — technical competence, maturity and responsibility, integrity, practical experience, commitment and social responsibility.

He cited employers who paid more to members than non-members (Prudential and Sun Life insurance companies), included membership as a requirement when advertising job vacancies (the Civil Service) and paid membership subscriptions (IBM).

A system that would have been a lot more like Chips if it had ever come to fruition was the ill-fated Claps system that the UK clearing banks spent £2 million on before it was scrapped early this year.

Chaps, the Clearing House Automated Payments Scheme, would have been based on an ICL 2960 system at the Bankers Automated Clearing Services centre.

It was killed partly because smaller potential users objected to the cost but also because the whole concept of a system based on a central mainframe was seen as rather outdated. Any future system will probably involve a network linking user banks' own computers.

They are people who do things, rather than simply how to do them, he asserted. He added: "As an employer I want men with (Bogod's list of) qualities, but BCS does not have a unique hold of them."

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PPL blows out its tenth birthday cake

A COMPANY which has built its business entirely on packages celebrated its tenth birthday last week. In the last decade Package Programs Ltd has adapted and promoted many widely used packages, the most famous being the MMS general ledger and accounting system.

The continuing success of PPL in the software market was explained by chairman Roy Taylor in his celebratory speech. "We have established a successful philosophy in selling package programs with no modifications. Only in this way can we maintain systems, and we will expand because of our basic philosophy," he said.

Not a preparation for underwater exploration — our picture shows behavioural scientist Jane Alexander taking part in an investigation of the human factors involved in using the new Monarch PABX switchboard, conducted at British Telecom's Martlesham Research Laboratories.

Like similar devices used in aircraft cockpits, the mask enables eye movement patterns to be studied to see if the keyboard layout can be improved.

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VIDEO'S	ADS Regent	SINGLE UNIT PURCHASE	End User OEM/Educ/Cash
20	550	523	586
25	780	741	846
40	880	846	946
60	1,380	1,320	1,320
25-10	1,380	1,320	1,320
Consort 980	750	712	712
4010 Emulator			
Ampex	680	627	627
D30	60	57	56
2K Memory	100	86	86
2K Page Screen Disp.			
PRINTERS			
Quantum			
Sprint 5/45 KSR	1,772	1,683	1,683
Sprint 5/45 RO	1,529	1,453	1,453
Tractor (bi-directional)	120	114	114
Cut Sheet Feeder	650	818	818
LogAbax			
LX 213 RO	1,490	1,416	1,416
LX 413 RO	1,080	1,027	1,027
LX 103 RO	1,081	1,027	1,027
LX 102 RO	1,950	1,863	1,863
Olivetti			
LX 311 RO (Daisy)	1,275	1,211	1,211
LX 240 RO (Thermal)	760	722	722
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COMPANY NEWS

Datapoint to pay \$114 million to set up own European base

JUST after announcing that it wants to take over the international network of distribution for its products currently controlled by TRW (CW, October 2), Datapoint has completed its acquisition of ailing key-to-disk supplier Infrex, including its European subsidiary.

They will augment the activities of the existing distributors of Datapoint kit up this side of the Atlantic when TRW's master distributor agreement with Datapoint expires in 1983.

Compensation

In order to gain complete control of the existing distributors in Europe, Datapoint will have to make deals with several other organisations apart from TRW. Of the seven distributors in Europe five are only partly owned by the engineering giant. The other share-

holders include the Canadian Development Corp which owns the majority of Ventek, the Datapoint distributor in the UK.

Datapoint estimates that if all the other organisations agree to sell their interest, in addition to TRW, the total payment will come to \$114 million. This includes compensation to TRW for transferring its master distributor agreement and allowing Datapoint to deal directly with another 21 distributors all over the world.

The deal with TRW is expected to be completed by July next year, prior to Datapoint taking over the distributors in 1983.

Infrex in the UK is a much smaller operation than Ventek, but it is a major force in several European countries, including West Germany where TRW currently wholly owns the Datapoint distributor, Gier Electronics. The

acquisition of the Infrex European operations was seen by Datapoint as an important safeguard against losing distributors like Gier after 1983 if TRW refused to sell (CW, June 19). Now it looks like adding even greater strength to the European marketing side of what is one of the world's fastest growing computer suppliers.

The business now done by TRW's distributors provides Datapoint with not much more than 20% of its total revenues even though they account for about 40% of all shipments. And Datapoint cannot enjoy the benefits of maintenance and lease revenues from countries outside the US.

Leader

Datapoint's financial results for its last fiscal year ended July 31 are expected to include a turnover figure of well over \$300 million, compared with \$232 million in the previous year.

The company plans to maintain its flat growth rate by becoming a leader in the office systems market with its Integrated Electronic Office (CW, January 10).

Datapoint's plans for the existing Infrex products, including the 5000 file management system and 7000 intelligent cluster terminal, are less certain.

ABS changes its name

TRAFAJLAR HOUSE subsidiary Allied Business Systems has changed its name to ABS Computers so that it can be seen as the true computer manufacturer it is, according to managing director John Elsden. The parent company's funds

few months.

ABS has still not made up its mind about taking over Business Computer (Systems) Ltd which it acquired the option to purchase in 1978. At the time it took over BCSL's factory at Brighton and assumed the role effectively of an OEM supplier to BCSL.

ABS will have to decide soon about making the relationship even closer because the option to purchase expires at the end of the year.

The ABS financial year ended on September 30, but the company's financial figures are consolidated with those of its much bigger parent so it is difficult to ascertain the rate of growth of ABS or its financial health.

In its 1979 financial year BCSL chalked up turnover and profit figures of £3,925,813 and £351,761, up 56% and 47% respectively in 1978.

Another firm

sues AT&T

ANOTHER anti-trust suit is planned against AT&T in the US, this time from Telesciences, maker of computer controlled equipment for the telephone industry, which is to seek a permanent injunction to stop AT&T and its manufacturing and operating subsidiaries monopolising the market.

The main suit against AT&T by the US government Justice Department, is scheduled to go to trial in January.

CW SHARES TABLE

Date: 2/10/80		London Stock Exchange		Pence		8		US Stocks		Pence		8	
High	Low	Stock	Price	Chg	High	Low	Stock	Price	Chg	High	Low	Stock	Price
811	738	A Comp Tech (1969)	480	+2	20	190	Airtex	16	+1	16	15	Alcoa	210
825	758	AMF Int'l (1971)	58	-2	20	190	Amico Data	40	-1	40	35	Amoco	210
826	758	Amoco (1971)	40	-1	20	190	Amoco Gas Prod	31	-1	31	25	Amoco	210
827	758	Amoco Gas Prod	40	-1	20	190	Amoco Oil Co	43	-1	43	35	Amoco	210
828	758	Amoco Oil Co	40	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
829	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
830	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
831	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
832	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
833	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
834	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
835	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
836	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
837	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
838	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
839	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
840	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
841	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
842	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
843	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
844	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
845	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
846	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
847	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
848	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
849	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
850	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
851	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
852	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
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856	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
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861	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
862	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
863	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
864	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
865	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
866	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
867	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
868	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
869	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
870	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
871	758	Amoco Prod Co	10	-1	20	190	Amoco Prod Co	10	-1	10	8	Amoco	210
872	758	Amoco Prod Co	10	-1	20								

HP top of user 'pops' – but Burroughs gets the thumbs down

SURVEY REPORT BY TIM PALMER

WILLIAMS PACKARD comes on the clear winner and Burroughs gets an even more emphatic thumbs down in the business computers and minis section of the Datapro Computer Weekly survey of satisfaction among UK computer users.

Companies with fewer than 10 users will have been eliminated from the results, reducing the field from 10 to 17.

Four companies, Redifin, DEC, IBM and Texas Instruments, join Hewlett-Packard with a rating of 3.0 or more out of four. A whole host are on 2.9 including ICL, GEC and Prime, and NCR trails the bunch with 2.7. There is then a gap of over half a point before Burroughs brings up the rear with a worrying 2.1 rating.

Easy to operate
Hewlett-Packard, with 21 users in the survey, is represented by all three lines: the HP 3000, 2000 and 1000, with 15 users of the first. The company rated particularly high on ease of operation, reliability, system software and maintenance.

As with the mainframe survey (CW, September 18) technical support was marked low for all manufacturers, but Hewlett-Packard was near the top of a low-rated section. Only one company scored as high as 3.0 in this section, and that was IBM for its documentation.

DEC and IBM tied for second place with a 3.1 rating for user satisfaction.

The full spread of PDP-11 machines was represented in the survey, and among the 136 DEC respondents there were also 11 PDP-8 and six VAX users.

WEAKNESS ON TECHNICAL SUPPORT

Weakness on technical support was the main reason for DEC being pipped for top place in the business computers and minis section of the Datapro Computer Weekly survey of satisfaction among UK computer users.

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The IBM users, 19 of them, are emphatically in the latter camp, with only four using the Series 1 mini. The majority, 64, have System 34s, and the bulk of the remainder are users of various models of System 3.

There are no striking variations between the responses of users of different IBM machines, and IBM scored high on ease of operation, reliability, system software and maintenance.

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APART FROM THE LATTER CAMP

Apart from the latter camp, the survey is that minimakers and business systems suppliers are lumped together and in many cases, such as DEC, it is impossible to separate traditional minicomputer users who are running technical applications and need little support, from commercial users who want copious support.

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THE BIGGEST WEAKNESS

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THE HONEYWELL BULL

In fact, System 30 users are among the happiest in the survey with an overall satisfaction rating of 3.1. The machine comes out particularly well on reliability and ease of use, and the users also give ICL a glowing 3.0 for both responsiveness and effectiveness of maintenance. Technical support comes out comparatively well too,

THE HONEYWELL BULL

There were 15 users of the Honeywell Bull system from CMC in the survey, and the machine lived up to its publicity in that it was given 3.5 for ease of operation, 3.5 for the operating system and 3.0 for ease of programming.

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THE HONEYWELL BULL

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THE HONEYWELL BULL

Why maintenance of software should be contracted out

MAINTAINING your installation's software is the job we all love to hate. It is often given to a junior member of staff who then finds that the specs are not quite up to the standard recommended by either IBM or the National Computing Centre.

The lucky programmer may even find that all he/she is getting is a program listing plus a couple of flowcharts!

As some terms mean all things to all men in DP, it is necessary to define what is meant by the term "maintenance". In this instance we are talking about the maintenance of software packages in a user's installation and this means the continual updating and slight modification that occurs from time to time.

There are many reasons why users have to maintain their software, the most common being changes in the law and technological innovation such as a new per-

ipheral that doesn't quite have the same codes as the present system.

Necessity

The necessity for maintenance arises with packages having the following characteristics:

1. Between 250,000 and one million lines of source code;

2. Only 20% of the facilities of the package are currently used in the installation;

3. Another 20% of the facilities in the package are potentially useful to the installation. The installation does not use these facilities on account of their low cost/benefit ratio. The low ratio is due to the expense and risk involved in bringing the facilities into use;

4. Not every user uses the same 20% of the package and there is a 20% of the package that nobody uses;

5. There is a new release of the package every six months and a

typical installation is three behind with its release level;

6. A good man has to be put on the maintenance;

7. Some maintenance is critical and when it has to be done it causes trouble; and,

8. Most maintenance has no pay-off.

The operating system and most items of system software come into this category. Major applications packages may also have similar characteristics and often their nature makes this a large and time critical job which disrupts other operations.

This can cover anything from computer system operation to the telecommunications network or the user requirements from the applications package.

Problems

Often resources have to be devoted to the maintenance that are urgently required on user oriented systems. How can this disruption be avoided?

The problems are due to factors arising from the characteristics of a

major software package. The detailed knowledge of the package is only used occasionally and, inevitably, time has to be spent re-learning when the knowledge is needed.

Keeping up with the new releases of software and updating existing suites is always a low priority job and this occasionally results in problems. The whole responsibility could be contracted out, as is done for hardware.

Consultant Cliff Dillaway explains what is involved and describes how the use of specialists can prove beneficial.

The management at most installations believe that they have to keep software package maintenance under their wing as their own direct responsibility. This attitude contrasts strongly with the view taken on hardware maintenance.

In reality a lot of what is called hardware maintenance is software maintenance of a similar nature to that we have described carried out on the microprograms held in control storage.

This can cover anything from software houses, which would like to offer a solution, are unlikely to have the staff with the necessary experience.

So I suggest that a suitable person to whom software maintenance could be contracted would either be the proprietor of a small software house or a one man consultancy specialising in this type of work.

Many installations have lost a systems programmer who leaves

it, it would need to maintain a level of competence in the software. If specialists are likely to maintain a higher level of competence than a maintenance programmer who only looks at the software every 12 months or so.

Second, the maintenance service needs to be instantly available. However if the service is up to date with its preventative maintenance (application of releases and fixes), the number of casualties when true instant availability is necessary will be very rare.

But such support has to be as prompt as that for hardware maintenance.

Third, it needs to understand the application requirements. As a specialist's service it should be able to understand what the software is required to do much better than the occasional maintenance programmer.

The ramifications of accounting, stock control or payroll are easily misunderstood by those not conversant with the terminology. Users appreciate it when they only need to sketch out their requirements for a specialist to understand and implement them.

Fourth, a service company should be able to keep the cost of contracted maintenance to no more than if the work was being done by a staff programmer.

This is likely to be so, as a specialist should be able to do the work in a much shorter time than the maintenance programmer who has to go back to the books and square one every time he tackles a job.

These requirements can be met. They are, after all, the requirements that a computer bureau user expects from the service given by the bureau.

It is only fair that insists that all programmers should be on our own staff.

COURSES

THE Management Studies Centre of ICF is running two courses designed for small and medium sized firms who are considering computerisation for the first time, or who wish to upgrade their facilities. Computers - Successful First Use will be held in London on October 29. Negotiating Computer Contracts will take place in London on October 30. For further information, telephone: Neil Chilton-Miller on (0753) 56633.

A PRACTICAL course on visual simulation techniques with emphasis on hands-on experience, is taking place between December 15-19. Aimed at management scientists, production engineers and programmers, the course is being organised by the University of Lancaster.

by Cliff Dillaway



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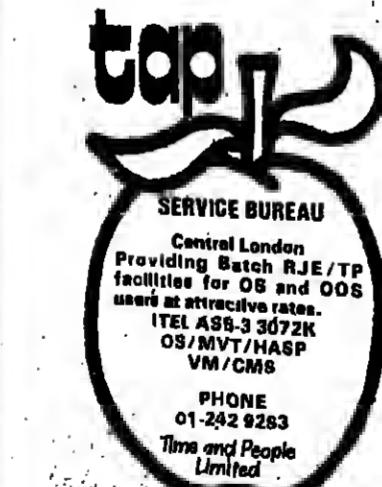
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COMPUTER WEEKLY

OCTOBER 30, 1980

RECRUITMENT & EDUCATION SUPPLEMENT

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In spite of rising unemployment the computer industry continues in its demand for a regular supply of qualified computer people. As the market expands, so does the need for new skills and abilities. Although more and more training facilities are available, the chronic shortage of manpower remains, causing a major problem for all companies involved with computers.

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challenge and share in the achievements of the next decade and beyond.

This year's supplement will be published on October 30 and distributed in the normal way to all Computer Weekly readers. Copies will also be available to visitors from the Computer Weekly stand at Compec. Last year, some 34,745 visitors attended the exhibition.

The supplement is a unique publication, being the only newspaper of its kind produced in the U.K. dealing specifically with the subject of careers and job opportunities for DP personnel. The combination of the supplement's extensive editorial support, the large circulation, and Computer Weekly's standing in the industry, means this supplement is a must for recruitment advertisers.

For further details regarding the supplement and the special Compec *free* computerised recruitment service, contact your nearest Computer Weekly Classified Office: London: 01-261 8028/8019/8174/8097. Manchester: 061-872 8861. Birmingham: 021-356 4838.

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The company operates an IBM 3081 mainframe updating to IBM 4341 next year. The operating system is OS/VSE with POWER and CICS using IDMS Databases. Distributed processing with IBM System 34 links lectures and major regional centres. Continuing development work on new systems means that there is now a need for:

ANALYST/PROGRAMMERS

For both mainframe and System 34 work. You should have several years' sound practical experience in programming and systems design and implementation. A good knowledge of COBOL and/or RPG2 is required and ideally some experience of programming under CICS software.

PROGRAMMERS

For both areas. You should have good programming experience in COBOL/RPG2 together with a knowledge of IBM mainframe and System 34 equipment.

All appointments offer a good salary, air fare paid to South Africa for you and your family, a generous settling-in allowance, accommodation allowance on arrival, and return air tickets or cash instead of contract which will entitle you for a period of two years.

If you want to make a new life for yourself and your family while enhancing your career prospects in a highly successful company, phone or write now to Barbara Phillips for an application form or send your c.v. to the address below.

01-491 4706
OR WHEN BUSY 01-439 3411

Knight Computer Services Ltd.,

14 Old Park Lane, London W1Y 4NL.
Staff Services Division of BOC Datasolve Group
and 96 a member of Computer Services Association

Knight

New Dimensions IN CA/CAM

Throughout the U.K.

Throughout the U.K.

Senior Sales Consultants

ON TARGET £22K + CAR + OTHER BENEFITS

To sustain their rapid growth Applicon are seeking a number of professionals in computer sales. You will need an in-depth understanding of the computer industry and a background in a sales and/or graphics environment. As your clients will be amongst the leaders in British Industry you must be able to converse at senior management and board room level and also be capable of discussing complex installation, operation and capabilities with client technical staff and designers. Ideally you should have a knowledge of computer aided design systems and have a proven successful sales record.

The rewards package includes a high basic salary and an on target package of £22K plus regular sales competitions, bonuses and prizes. A company car is provided and a relocation package is available though your present and future location is unimportant.

Application Systems Consultants

TO £10.5K + CAR (dependant upon experience)

PRE & POST SALES SUPPORT

CAD Systems experience is an essential either with a manufacturer/supplier of CAD Systems or with a client company. A technical qualification is desirable and it would be advantageous to have experience in mechanical, electrical/electronics, power/process or construction industries.

Your main areas of responsibility will be to provide professional applications advice and guidance to prospects and customers and to demonstrate the Applicon product range. The training of Applicon users staff is another prime task.

Initial induction training will cover all aspects of Systems and Applications dependant on experience and will take place at Applicon's headquarters in the U.S.A.



with  **Applicon**

Applicon - world leaders in the design and manufacture of CAD/CAM Systems was formed in 1969.

Operating through 23 offices in the U.S. and Europe the Company can claim major firsts; it has hundreds of installations worldwide and more than 200 cost effective proven applications programmes available and installed.

The UK Company, with its headquarters in superb, modern offices

Customer Service Systems Engineers

TO £9K + CAR

Applicon's reputation is being made not only by the quality of its products but also by its post sales service. To sustain this high servicing standard a number of Service Engineers are required. You will need to be both a skilled Engineer and able to work alone dealing personally with major customers.

Ideally you will have worked on DEC PDP 11 Systems with a manufacturer or user. You should be familiar with discs, tapes, memories, displays etc. A 'systems' approach to problems and the ability to think clearly and logically is important.

Whilst a major part of your work load will be systems problem solving you will also be called upon to assist in installation, support and sales, particularly exhibitions and trade shows.

A six week programme of product training will be undertaken in Burlington, Massachusetts, USA.

All positions have an attractive range of fringe benefits in addition to salary, car and relocation package and offer excellent opportunity for job satisfaction and career progression.

As I.M.P.C. have been exclusively retained as consultants to Applicon all enquiries or applications should be made to John George, Managing Director, on Manchester 061-236 7026 or if you prefer write to him at our Manchester Office at the address below:



**INSIGHT MARKETING
& PERSONNEL
CONSULTANTS LTD**

Manchester - Austin House, Charlotte Street,
Manchester 1. Tel: 061-236 7026

London 72-75 Marylebone High Street,
London W1M 4AJ. Tel: 01-486 5644

International - Walden House, 32-33
Marylebone High Street, London W1M 3PE.
Tel: 01-486 7938

Ireland - 20 Upper Fitzwilliam Street, Dublin 2.
Tel: 0001 766387

JBA

MIDLANDS

Territory Manager - Sales

West Midlands

Earnings c. £15,000 inc. car

Our client is one of the largest British owned computer manufacturers and an acknowledged leader in its field. Their product range and marketing record throughout the U.K., Europe and the Middle East is outstanding. They now require a further TERRITORY MANAGER for their West Midlands marketing branch.

Applicants should ideally possess successful d.p. sales experience but those able to demonstrate sales potential will be considered. Excellent training facilities are provided. Applicants currently resident in the West Midlands will be given preference.

This position offers genuine prospects in a solid, professional company.

Contact: Mike Gaitskell

Team Leader

Nottingham

up to £7,500 + Benefits

An opportunity exists for a Team Leader to work on a number of challenging applications currently under development within the Research Department. The company is well known and respected and has an advanced computer installation comprising main frame and mini computers.

Applicants should have ideally 5 years programming experience and be proficient with FORTRAN, COBOL or Assembler language in an IBM environment. Familiarity with mini computer applicants development would be desirable but the ability to lead and motivate teams of programmers and analysts is essential.

Contact: Bev Stevens

Team Leader - Programming

Birmingham

£6,500 + car scheme + & Benefits

This mini computer systems company, a very effective subsidiary of a prominent and respected group, continues to operate successfully throughout the U.K. They now seek a PROGRAMMING TEAM LEADER for their Birmingham office.

Applicants should have 3 years COBOL experience on any hardware and must either have acted in a supervisory role or have developed sufficiently to be capable of assuming this responsibility.

Conditions of employment are impressive and the benefits considerably enhance the basic salary.

Contact: Mike Gaitskell

JAMES BAKER ASSOCIATES, International Personnel Consultants,
Gateway House, 50 High Street, Birmingham B4 7SY. Tel: 021-643 7865.

Systems Analysts/Programmers,
Quality Assurance Specialists
for Software Development

System Programmers

Qualified personnel wanted for our Frankfurt Data Processing Division. Software is being developed in areas such as business administration, aircraft maintenance, inventory-control, sales, traffic and flight operations.

Equipment includes IBM 3033, 3032 and UNIVAC 494, 1100/60 used for real-time, batch and network communications processing.

Applicants should have either a good knowledge and experience in data processing and/or have graduated in computer science, economics or science.

This position demands analytical thinking, above-average adaptability and self-motivation. Some knowledge of German would be an advantage.



For the Operations Department in the Data Processing Division in Frankfurt, we are looking for System Programmers for our central system UNIVAC 494 and 1100/60 also IBM 3033 and 3032.

Applicants should have either graduated from a university or completed a technical qualification in the areas of computer science, economics or science.

The positions demand a high level of responsibility, above-average adaptability and self-motivation. Some knowledge of German would be an advantage.

Lufthansa German Airlines
Parsonseeblickung CGN PS 2/15
Von-Gebenstr. 2-6
5000 Köln 21
West Germany

For further details you may contact us from Oct. 13th to Oct. 15th under telephone 01437/0434 Ext. 239

Lufthansa

0088

Systems Designer

Gloucestershire

£6,000-£8,000

This computer services company of a large trading group with branches throughout the U.K., have a vacancy for a SYSTEMS DESIGNER. Applicants should possess sound ICL 4900 technical knowledge and ideally have designed and progressed a system through to implementation. This represents an ideal opportunity to develop experience of communications systems. Excellent discount scheme and benefits plus relocation assistance.

Contact: Mike Gaitskell

Programmers

Kenilworth

c. £6,500

An organisation involved in the development of a new international project is seeking to recruit a number of programmers. The work will be challenging and will provide ample opportunity to develop technical skills in the on-line, communications and database fields.

Applicants should have at least 1 year's IBM COBOL experience and have the desire to work on the development of applications in an IMS DL/I environment.

Contact: Bev Stevens

Gloucestershire

Our client, located in a very pleasant area, is a long established and respected division of a large and successful International Group. In order to develop systems to support the integrated administrative and distribution activities of several member companies they require:

Systems Analyst

£6-7,000 Review 1 December

Applicants should ideally have 2 years experience of computer systems but those having less experience, but relative to administrative or distribution applications will receive equal consideration. The successful person will possess management potential.

Senior Programmer

£6,500 Review 1 December

Candidates should be educated to A level and possess 2 years' COBOL programming experience preferably on ICL, 4900 or 2900 equipment. Knowledge of PL/I and FORTRAN while being an advantage is not essential. These are excellent opportunities to work on interesting projects in a purposeful atmosphere. Relocation assistance and normal large company benefits apply.

Contact: Mike Gaitskell

MYRIAD

COMMUNICATIONS SYSTEMS
ADVANCED DEVELOPMENTSOFTWARE PROGRAMMERS : GRADUATE PROGRAMMERS
SYSTEM ENGINEERS

£5,000-£7,700

READING

Your background:

- * Two/three years' Assembler Programming
- or
- * Two years' mixed electronics and software development
- or
- * 1979 Graduate now seeking a more challenging and demanding role
- or
- * 1980 Graduate with Upper Second or First-Class degree seeking a real career opportunity.

The company is part of an extremely successful British group which is one of the fastest expanding organisations in the U.K. Already the market leader in its field, the current and forthcoming product development projects will extend this lead and ensure a healthy future throughout the 1980s.

A high commencing salary is offered supported by valuable benefits and outstanding career prospects.

Your experience:

- * Whichever category you suit you will ideally be familiar with one, or more, of the following:
- ZILOG Z80/INTEL 8080 Micros and Assemblers.
- PDP11, RSX11, MACRO-11
- Data communication protocols and techniques.

Ref: SW1/0910/CW

18 MONTHS' COBOL

N. SURREY/S.W. LONDON

£6,500-£7,500

Having recently upgraded their IBM hardware, our Client is now anxious to develop a range of applications utilising the new facilities. Additional programming staff are therefore required and we are seeking applicants with a good academic background and 18 months' COBOL experience.

- * IBM 4300
- * ON-LINE AND DATABASE
- * ANALYSIS TRAINING
- * CLOSE TO B.R. STATION
- * RELOCATION PACKAGE
- * LARGE INTERNATIONAL ORGANISATION

These positions represent a positive career move, being part of the long-term DP plan, with formal training at all levels.

For a confidential discussion regarding these vacancies, please quote reference SI/0910 when telephoning.

Ref. SI/0910

IBM ASSEMBLER?

→NEW CAREER OPPORTUNITIES

WEST LONDON

Up to £10,500
+ Benefits

Do you possess at least two years' IBM ASSEMBLER experience but feel restricted by development prospects within your present company? Our client may be able to offer just the challenge for you at this point in your career.

We are seeking to recruit a systems software programmer to become an integral member of the systems software team and work on networking, special software development and teleprocessing systems. Candidates therefore may look forward to successfully broadening their systems experience in this very progressive organisation.

The commencing salary is negotiable and the company also offer a very attractive supporting benefits package.

Ref. NW1/0910

PROGRAMMERS→
PROJECT LEADERS

£7,000-£11,000

Additional Programmers, Analysts and Project Leaders are required now to enhance the development team of a major organisation able to offer a secure future and positive career development. Extensive use is made of large IBM mainframes and mini computers to develop systems using on-line and database techniques.

PROGRAMMERS should have a minimum of one year's COBOL or Assembler experience.

ANALYSTS should have a programming background and eighteen months' analysis experience.

PROJECT LEADERS should be capable of designing and controlling projects from feasibility to implementation.

A full range of benefits, including relocation assistance, also support these outstanding opportunities.

Ref. WI/0910/CW

COBOL PROGRAMMERS
YOUR NEXT MOVE?

To £8,500 + Benefits

Our client, based in the City, is seeking to expand its programming team in order to cope with new development using on-line database techniques.

Programming will be in COBOL and ASSEMBLER, and this could be an ideal opportunity for the successful applicant to learn ASSEMBLER, for which full training will be given.

Whilst IBM experience is desirable, it is not essential and full consideration will be given to people with experience of other hardware.

In addition to working with the latest hardware in pleasant offices within easy access of major transport routes, these positions carry excellent benefits together with a long-term and positive future.

Ref. EI/0910

MYRIAD APPOINTMENTS LIMITED

30 Fleet Street London EC4Y 1AA Telephone 01 353 0981 24 hours

13078

Field Service Engineer

-An opportunity to specialise.

c. £9,000 + car



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 Brussels 010 322-840 7151/71 Avenue Louise 327, Bte 4, 1050 Brussels

Specialist Computer Recruitment Ltd.

THORRAR

(RECRUITMENT AND CONSULTANCY SERVICES) LIMITED

SPECIALISTS IN DP AND EXECUTIVE RECRUITMENT

ESSEX/HERTS.
(Generous Relocation Package)

OPS MANAGER

To £10,000 + Bonus + Review Jan.
'81

- Solid ICL operations background
- Communications experience
- Good technical awareness
- Potential to become key member of expanding D.P. unit

If you are interested in any of the positions mentioned and feel you possess the correct experience or potential to succeed contact Jack Collings on Hurstpierpoint 833848 (9 a.m.-5 p.m.) or on 0273-400880 any evening or weekend after 6.30 p.m. Local interviews can usually be organised.

Ref. CW/48/80

Hertfordshire based

Having performed effectively as a Field Service Engineer, you may be wondering what the next career progression step should be.

Consider this.....

We are offering an opportunity of becoming a specialist in the area of communications products;

- gaining a much deeper technical knowledge
- an involvement with software, as well as hardware
- a 3rd level support function

Combine these points with the fact that we are an expanding organisation, are constantly introducing new ranges, and are part of one of the world's largest and most respected group of companies, and we doubt you'll be able to better the prospects anywhere in the industry today.

The successful applicant should possess, in addition to a computing background, the presence and personality necessary to represent an organisation at the highest level of customer contact. In return you will receive a degree of independence and flexibility not normally associated with such a role, and a job content second to none.

Suitably qualified applicants should, in the first instance, contact Andy Carter on 01-935 0671, or St. Albans 35033 evenings and weekends, when interviews will be arranged at your convenience and our expense.

1.4.11.12.13
MODUS

Australia

Emigrants to Victoria or New South Wales

Call us for direct contact with a leading consultancy in the Data Processing marketplace for all levels of staff permanent career-oriented positions. We are primarily interested in Programmers, Analysts, Project Leaders/Managers, Customer Service Engineers, and Sales Personnel.

Modus will provide advice and offer personal administration of your introduction to a choice of jobs in Australia, commencing with an interview with one of our consultants. We can also advise on the logistics of moving to Australia.

Customer Engineers with Univac Experience

Our Associate Company are keen to hear of any Field Service or Customer Engineers with experience on Univac systems or, alternatively, Honeywell. Interviews will be held in the U.K. as soon as possible.

Programmers — Cobol or PL1 or Bal

CICS training available for high quality programming staff

Belgium

salaries c. £18,000

Programmers and Analyst/Programmers with 3 years plus experience gained in an IBM environment are required to join a new development team being assembled to transform a straight 370/DS/DSI into a modern, DDP oriented 4300 DDS/VSE with CICS environment.

In our experience, companies rarely turn to the U.K. for staff whom they are willing to train, so this is a unique opportunity. However, candidates must show a better than average awareness of computing in general as well as overall keenness and enthusiasm for their work. These are permanent job opportunities and therefore the willingness to live indefinitely in Belgium is of paramount importance.

Analysts & Programmers

To join one of the most advanced installations in the country

S. Home Counties

£7,500-£10,500

Our client is an extremely well known financial organisation, with a well publicised and highly successful growth record in the British finance world. The Company's d.p. function has grown from a fairly standard batch environment to a multi-machine (both mainframes and minis) site running both real-time, and on-line systems.

Modus is seeking a high quality of experience although the minimum acceptable is 3-4 years, ideally covering on-line systems design and implementation.

Company benefits are worth over £2,000 on top of the salaries quoted above.

Software Consultants

To design real-time and communications systems operating software

London, Beds. or Herts.

to £11,000 + profits

Software specialists who can demonstrate a deep knowledge of real-time and/or communications software design, especially in conjunction with good experience of modern minis or micros, now have the opportunity to join a highly professional specialist software consultancy.

This company has successfully established a reputation in the USA and Europe for technical excellence and superiority and is striving to do the same in the U.K. Candidates should therefore possess a degree, be personable as individuals, and display a high level of intellectual ability.

If the advertised positions do not match your experience or aspirations, Mike and Andy are always available for a confidential discussion of the possibilities. An informal meeting — often an essential part of the process — can be quickly arranged.

Consultants: — Mike Creemer or Andy Wright

WEST SUSSEX

International manufacturer of Disposables

SENIOR A/PROG. c. £8,000
ANALYST/PROG. c. £7,500

- R.P.G. 2 on any machine
- Between 1-3 years' total D.P. experience
- System 34/Mapics a plus
- Willingness to do short 2/3-day trips to European centres

HOME or ABROAD

These are just five of the exciting opportunities with our clients that will earn you £10-£18K.

Plus generous tax-free overseas allowances

OP CONSULTANT, London or the North feasibility studies — D.P. strategy — minis/micros. (CR 220)

SYSTEMS DESIGNER, London or Germany, real time systems, e.g. automation, medical, process control. (C.R. 204)

BUSINESS ANALYST, Person, Gull, to implement system development standards and/or prepare specifications for users requirements. (CR 244)

RING NOW for details, quoting the consultants reference.

cb executive (kingston) Ltd 01-549 8441 (24-hr) 13074

LIVERPOOL POLYTECHNIC
 DEPARTMENT OF MATHEMATICS

Principal or Senior Lecturer
 In Computing/ Data Processing

£5,000-£11,250 — SENIOR LECTURER
 £10,000-£13,248 — PRINCIPAL LECTURER

A senior member of staff is required in the Computing / Data Processing section to teach C/P Systems Analysis and Design and Information Systems to degree, diploma and post-graduate courses.

Applicants should possess qualifications and preferably practical experience in the field of computing. A knowledge of the use of micro-computers and/or data base systems would be particularly welcome.

PLEASE QUOTE REFERENCE LP-405

Conc. date 14 days from the appearance of this advertisement.

Applicants form and further particulars from the Personnel Office, Liverpool Polytechnic, 2 Rodney Street, Liverpool L1 2UA. Tel. 051-708 4620 Ext. 43.

(307)

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FACILITIES MANAGEMENT BUSINESS SYSTEMS CONTRACT STAFF SUPPORT RECRUITMENT CONSULTANCY
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HEXAGON CONTRACT DIVISION

IBM COBOL CICS DL/1 AN/PROGRAMMERS

Initial 3-month contract for very experienced personnel with more than 8 years' DP background. DOS/VSE knowledge would be an added advantage.

IBM APL ANALYST/PROGRAMMER

We are looking for 2 experienced APL Analyst/Programmers for locations in London and the Home Counties. A commercial background is an added advantage.

IBM

MVS SYSTEMS PROGRAMMER

Knowledge of JESII, TSO and CICS also required for contract in London Area.

PDP

BASIC + PROGRAMMERS

A vacancy for personnel with more than 12 months' experience of BASIC+2. Knowledge of RSX11 also necessary.

PDP

COBOL PROGRAMMERS & TEAM LEADERS

We are setting up several teams for 6-12-month projects in Central London.

PRIME

COBOL+PL1+DOS PROGRAMMERS

Initial two-month maintenance contract in West London.

IBM

Hexagon is currently expanding its Contract Division and would therefore be very happy to discuss these and other contract vacancies. If you are now seeking your next contract, or thinking of contracting as your next career move, why not call us for a "no obligation" chat? We are here until 8 p.m. most evenings...

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HEXAGON COMPUTER SERVICES

Hexagon House 3400 Wimborne Street, London W1V 3TA



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Initial two-month maintenance contract in West London.

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Hexagon is currently expanding its Contract Division and would therefore be very happy to discuss these and other contract vacancies. If you are now seeking your next contract, or thinking of contracting as your next career move, why not call us for a "no obligation" chat? We are here until 8 p.m. most evenings...

IBM

HEXAGON COMPUTER SERVICES

Hexagon House 3400 Wimborne Street, London W1V 3TA

CONTRACT DIVISION

IBM APL ANALYST/PROGRAMMER

We are looking for 2 experienced APL Analyst/Programmers for locations in London and the Home Counties. A commercial background is an added advantage.

IBM

MVS SYSTEMS PROGRAMMER

Knowledge of JESII, TSO and CICS also required for contract in London Area.

PDP

BASIC + PROGRAMMERS

A vacancy for personnel with more than 12 months' experience of BASIC+2. Knowledge of RSX11 also necessary.

PDP

COBOL PROGRAMMERS & TEAM LEADERS

We are setting up several teams for 6-12-month projects in Central London.

PRIME

COBOL+PL1+DOS PROGRAMMERS

Initial two-month maintenance contract in West London.

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We are looking for 2 experienced APL Analyst/Programmers for locations in London and the Home Counties. A commercial background is an added advantage.

IBM

ANALYST/PROGRAMMERS**Nottinghamshire****C.£7,000****3 yrs. experience**

A rapidly expanding computer division servicing a major commercial conglomerate requires Analyst/Programmers to join their progressive team developing new commercial systems for on-line applications. Current proposals include upgrading of new ICL 2900 series equipment running ultimately under the latest operating systems.

Successful candidates will ideally have 3 years' COBOL programming experience prior to development into analysis and should be prepared to work on their own initiative and have confidence to be involved in direct user contact.

The Company, which is situated in rural Nottinghamshire, offers usual fringe benefits coupled with genuine opportunities for promotion.

Contact: Roger Carr

Hegley 885136 (Evenings)

PROGRAMMERS**Birmingham****To £8,500**

Our Client, a leading major manufacturer, currently using the latest IBM hardware, is looking for Programmers with at least 3 years' COBOL experience. Work currently being undertaken is On-Line Real Time development. A knowledge of CICS/DL1 would be an advantage, but is not essential.

Opportunities to progress within the Organisation exist for the right applicants.

Ref. 5/664

Contact: Christine Pountney

ANALYST/PROGRAMMERS**Birmingham****To £7,500**

Programmers who have 2 years' plus COBOL experience and are looking for a move into Analysis would be ideal applicants for those positions. Our Client is looking for people who can work on their own, under pressure and be involved in a changeover of hardware to the latest IBM mainframes.

Financial and/or commercial applications experience would be preferable.

Ref. 5/659

Contact: Christine Pountney

ANALYST/PROGRAMMERS**Bristol****Up to £8,000**

An established systems house within the Bristol area, is seeking a number of candidates with experience of Basic or Basic+ on DEC PDP11 equipment to join its expanding software department. Vacancies exist for both analyst/programmers and customer support staff who have at least two years' experience in a commercial environment.

Ref. W297

Contact: Hazel Foggin

C. £7,000**PROGRAMMERS****Wilts**

A programmer with at least 2 years' experience of Assembler programming on IBM equipment is required by a client company in Wiltshire. The successful candidate will become involved in both commercial application programming and occasional systems programming. Relocation assistance will be given where necessary.

Ref. W288

Contact: Hazel Foggin

PROGRAMMING PROJECT LEADER**S. Staffs**

An experienced and mature programmer is required, capable of dealing with users and management at all levels, to handle the development and implementation of a range of batch and real-time application both manufacturing and commercial. The position offers an excellent opportunity to develop and control a team of programmers in a well-organised and progressive company installing the latest hardware.

Ref. B959

Contact: Peter Bowen

To £8,000**SYSTEMS ANALYST****Wolverhampton**

Our client requires a business systems analyst who has a COBOL programming background to develop a range of systems on new hardware. Database and On-Line manufacturing systems are the first objectives for this challenging position.

Ref. B932

Contact: Peter Bowen

Blackwood Associates
Recruitment Consultants26 Waterloo Street, Birmingham B2 5TJ.
Telephone: 021-233 2921 (24 hr. service)

A Member of the CPS Group of Companies.

INTERVIEWS ANY TIME BETWEEN
9 a.m.-5.30 p.m. EVENINGS AND
WEEKENDS BY APPOINTMENT
WRITE - BLACKWOOD ASSOCIATES,
FREEPOST, BIRMINGHAM B2 4BR

**PROJECT LEADERS
AND SYSTEMS
ANALYSTS**

Does a bright,
fruitful future
fit into your programme?

South Africa is gold country. We're in the middle of a boom period - which looks like going strong for some time to come - and consequently we're maintaining our reputation as a country filled with opportunity. It's a land of low taxation, an incredibly high standard of living and equally low cost of living. Interested? Kop

Fuel south of Durban, the Riviera of South Africa, lies the sophisticated

Motor Assemblies plant, where Thyssen, Roncalli and Alco trucks

are manufactured.

We're expanding, and we need your expertise and experience to help

shape our project's future - and advance beyond it.

The people we are looking for must have at least 4 years' D.P.

experience and the RJE operation would be an advantage.

We're prepared to offer generous relocation assistance in your move

to our country, assisted passage, a one month salary grant, one

month's accommodation in a hotel until you've found your feet. In

addition, you'll receive a very attractive salary, annual bonus,

excellent pension, medical aid and insurance schemes and leave car

inclusions. Oh yes... if your wife wants to move with you, we'll

arrange a month's free stay in a hotel.

Please enclose full career details, to: CHRIS MORSE,

Lindsey Smith Recruitment, 82 Baker Street, London W1M 1DL.

Motor Assemblies
Limited

PLYMOUTH
POLYTECHNIC
Faculty of Technology
Department of
Mathematics, Statistics &
Computing

LECTURER II/
SENIOR LECTURER
In Computing/Information
Science

Applications are invited for the above post which is newly created in support of the department - developing teaching and research interests in the application of computer technology to the processing of information.

Salary:
SENIOR LECTURER £8982-£11,285
LECTURER II £8012-
£8702

Application forms, to be returned by 31st October, 1980, can be obtained from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

UWIST
University of Wales.
THE WELSH SCHOOL OF
ARCHITECTURE
RESEARCH

ASSISTANT
to work on the further development and implementation of a finite difference thermal model for predicting the energy efficiency of buildings; candidates with experience in computer science or electronics preferred.

Salary: Range 19 £4,785-
£9,985. Requests quoting Ref. CIV for details and application form to: Personnel Section (Academic) UWIST, Cardiff CF1 3NU.

Closing date: 31st October 1980.

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Closing date: 31st October 1980.

**SENIOR
RECRUITMENT
CONSULTANT****C £12,000 + CAR**

Targa Computer Services, which was established in late 1978, is part of a Recruitment group of companies. We are currently looking for 2 Senior Recruitment Consultants to expand and develop further the recruitment services for the Senior appointments of the computing industry.

Ideally you should be over 25 with at least 3 years' computer experience, to include either Systems Analysis or Programming knowledge. You should have the ability to advise clients on salary levels; job identification and specification; and advertising, thereby compiling a client profile for suitable applicants. Additionally, you must be able to assess people and to advise them on their career development.

We offer a substantial benefits package including a basic salary up to £6000 plus an excellent commission structure, which is guaranteed for the first 3 months. There are also two incentive bonus schemes plus a company car after 6 months.

Please contact M. Deacon on 01-439 6749 or alternatively send him your detailed CV.

TARGA COMPUTER SERVICES
46/47 LONDON WALL, LONDON EC2M 5TE.
Closing date: 31st October 1980.

**Mini Computer
Engineers****MIDDLE EAST**

A rare opportunity has arisen for an experienced Engineer to join a very specialised systems house, who market their software as a total solution along with a major US minicomputer system. The successful applicant will transfer to this US company on their setting-up their branch office in Bahrain. The successful applicant will be a professional minicomputer engineer with some 3-5 years' experience, who will see this very much as a long-term career opportunity though not necessarily permanently in the Middle East. An excellent tax-free salary, company car, education grant and free accommodation in this most Westernised of the Middle Eastern states will be provided.

FOR A GENERAL DISCUSSION ON THIS EXCITING AND HIGHLY RESPONSIBLE POSITION WITH ONE OF THE WORLD'S LARGEST MINICOMPUTER COMPANIES TELEPHONE DOUG SNEDDON IN OUR LONDON OFFICE, QUOTING REF: DS21.

INSIGHT**INSIGHT LONDON**

COMPUTER AND PROFESSIONAL RECRUITMENT CONSULTANTS

INSIGHT MARKETING & PERSONNEL CONSULTANTS LIMITED

London - 72-73 Marylebone High Street, London W1M 4AJ.

Tel: 01-486 5641

North - Austin House, Charlotte Street, Manchester 1.

Tel: 061-236 7026

International - Walden House, 32-33 Marylebone High Street, London W1M 3PE. Tel: 01-486 7938

Ireland - 20 Upper Fitzwilliam Street, Dublin 2. Tel: 0001 766387

Recruitment **LOGISTIX** **in Informatics****Microprocessor Engineers**

Switzerland: Salaries to £16K

Our clients' Headquarters are located near Zurich. We are retained to recruit top calibre Microprocessor Software Development Engineers to join the company's permanent staff. Emphasis will be placed on technical achievement and in-depth experience in the areas of activity outlined below. A Bachelor or Masters Degree in Electronics, Electrical Engineering, Physics or Computer Science is a mandatory requirement. All candidates must offer four years' microprocessor software development expertise gained with a Manufacturer or High Technology Software Supplier. There is a preference for those fully familiar with Motorola 6800 or Intel 8085/8. German language course may be arranged but it is valuable to offer at least basic language ability. Every assistance will be given in relocation including the provision of temporary hotel or rented accommodation.

Ref: L417/A

Mini Software Development

Beds./Cambs: Salary to £10K

Our client is a highly respected Systems and Software Supplier having its Research and Development Facility in a most attractive East Anglian location. Current requirements are for Development Programmers offering a minimum of 18 months Basic or Assembler programming experience on any mini-computer or micro-processor. These positions will appeal equally to those with a scientific/academic computing background or com-

Ref: L417/B

Commercial Systems

Benelux: Salary to £15K

One of Britain's most successful, commercially orientated Systems and Software houses urgently requires Analyst/Programmers and Analysts for its Benelux operations. Whilst it is not necessary to have exposure to any particular hardware the Company does have a stated preference for candidates with experience of O.E.C.'s PDP, VME and medium to large I.B.M. mainframes. Knowledge of the techniques

Ref: L417/C

Pascal & ADA

Rural Oxfordshire: Salary to £11K

PASCAL & ADA will have a great future. If you want to participate in the realisation of their potential, please read on... Our client, an expanding Software/Systems Supplier is based on the edge of the Chilterns in an area of outstanding natural beauty. Current requirements are for Program Engineers and Designers who can offer a combination of academic achievement and practical exposure to both software and hardware orientated projects. Suitable candidates should have a real and demonstrable interest in PASCAL compiler development or have participated in the evaluation of ADA and similar hybrid languages. Interviews will be held in mid-October and offers seven days thereafter.

Ref: L417/D

CICS Programmers

Holland/Germany: Salary to £18K

A multinational organisation with offices throughout Europe and the USA has an urgent requirement for four Applications Programmers to work in their IBM 303X and 43XX installations in Holland and Germany. Suitable candidates should have developed and maintained an on-line, real-time system using CICS with DL/I. However, those applicants with relevant experience using any other IBM compatible TP monitor should not be deterred from applying as training will be given. These positions represent an outstanding opportunity for career-minded individuals to enhance their technical skills whilst at the same time enjoying the diverse cultural benefits of another society.

Ref: L417/E

Micro Business Systems

W. Home Counties: Salary to £10K

A leading supplier of micro-based business systems urgently requires Programmers to both develop applications packages and assist with their installation on customer site. Proficiency in Basic or Assembler is essential and will preferably have been gained on any leading mini or micro-computer. Applicants who are, additionally, able to demonstrate a knowledge of Pascal will be especially welcome. The company offers outstanding career opportunities in a rapidly expanding market sector and, by virtue of its extensive client base, exposure to a wide variety of applications.

Ref: L417/F

Software Trainers

Hampshire Coast: Salary to £10.5K

A leading manufacturer of mini-computers for both scientific and technical applications seeks several Software Trainers and Lecturers for its recently established Hampshire office. Work content will include the staff training of both existing and prospective customers in O.P. techniques and the Company's Software products. Education takes the form of product demonstrations, seminars, workshops and of course 'on-the-job' tuition. The development of software courses in areas not so far covered by the Company will form an essential and integral part of the post. Our client prefers candidates who have previous programming experience in either BASIC or ASSEMBLER. Previous lecturing or training experience is an obvious asset.

Ref: L417/G

Logistix, 10 Grenville Place London SW7 4RW

01-373 3063

Telex: 28800

LOGISTIX

13037

REAL TIME SYSTEMS—DEC BASED

HANTS/BERKS/SURREY BORDERS

An international leader in the development and manufacture of real-time industrial and military systems has career openings for a software manager and team leaders.

SOFTWARE MANAGER c. £13,000

For this crucial appointment you will need extensive software systems experience on DEC equipment using CORAL or MACRO II together with project control experience including the meeting of deadlines and the controlling of costs. You will have responsibility for about twenty-five software professionals and thus you need to be a good motivator and man manager. Your applications background could be in industrial process control, simulation or defence systems.

The company is accessibly situated near the M3 and offers attractive benefits including a non-contributory pension and life assurance scheme and relocation allowance where appropriate.

For further information, please contact MARK TRENS quoting reference CW/0910/4,

HUTTON EXECUTIVE SELECTION LTD.
HUTTON HOUSE,
HUTTON STREET, LONDON EC4Y 8HR

TELEPHONE: 01-353 7141 (24 HOURS)

TEAM LEADERS £8,000-£10,500

Reporting to the Software Manager you will lead a small team of about four software engineers. You should be a numerate graduate with experience in developing real-time software systems, preferably in MACRO II or CORAL on PDP 11s (RSX11M) in application areas such as industrial process control, simulation, defence systems or similar. It should particularly appeal to you if you feel ready to extend your technical background into a leadership role.

The company is accessibly situated near the M3 and offers attractive benefits including a non-contributory pension and life assurance scheme and relocation allowance where appropriate.

For further information, please contact MARK TRENS quoting reference CW/0910/4,

Hutton
SPECIALIST RECRUITMENT CONSULTANTS

PROGRAMMERS
DOS/VS/CICS/COBOL
To £11,000 p.a.
CENTRAL LONDON

NEW DEVELOPMENT OF ON-LINE TRANSACTION PROCESSING AND ADVANCED TEXT HANDLING ON IBM 4331 WITH INTEGRATED WORD PROCESSING ON IBM 3730.

If you are capable of learning quickly and taking the responsibility of operating under minimum supervision, you will enjoy working for this well-known City firm. The opportunities for technical and career development are excellent and you will be involved in new systems design and program specification.

CONTACT: BOB BOWER,
ADVISING DIRECTOR,
Ref. CW 0910/1

RPGII PROGRAMMER/ANALYST

INTERNATIONAL BANK
£8,000-£10,000 P.A. NEGOTIABLE PLUS
EXCELLENT BENEFITS INCLUDING 3%
MORTGAGE AND SEASON TICKET LOAN

CITY

The London office of an international bank will shortly be upgrading from a Burroughs L9000 to an HP3000. This has created an opening for a Programmer/Analyst to contribute creatively to the modifying of existing systems and the designing of new systems. The responsibility is considerable and thus we are looking for a person with initiative, a professional approach and ability to work largely unsupervised. The main requirement is at least three years' RPGII programming experience, preferably gained in a banking environment. Knowledge of COBOL would be useful but is not essential.

CONTACT: MARK IRENS, ADVISING DIRECTOR.

Ref. CW 0910/2

COMMUNICATIONS SOFTWARE SPECIALIST

WORD PROCESSING SYSTEMS
CIRCA £12K PLUS CAR
CENTRAL LONDON BASED

THE FOLLOWING EXPERTISE IS REQUIRED:
KNOWLEDGE OF IBM/ICL COMMUNICATIONS
PROTOCOLS.
ABILITY TO WRITE AND AMEND COMMS.
PACKAGES THEREFORE FLUENT IN ASSEMBLER
LEVEL CODING.
PRE AND POST SALES CUSTOMER CONTACT.
KNOWLEDGE OF GPO DATEL SERVICES.
MANAGEMENT EXPERIENCE OR POTENTIAL.

An excellent and rare opportunity has evolved at our Clients, a well-known and respected mini-computer and word processing systems manufacturer. They urgently require a sound communications software expert to take control of customers' teleprocessing requirements and to help modify existing communication packages. The position has enormous potential and management is a natural and imminent progression.

CONTACT BOB BOWER, ADVISING DIRECTOR

Ref. CW 0910/3

NOTICE—Local and London Commuters— All Change to a New Line at CHELMSFORD

We are looking for two people to form the systems programming section of our clients new installation. This is to be a 2MB 4341, operating under OS/VS1 and using VM/CMS for on-line programming in PL/I. The company has a household name, and is a member of one of the leading U.K. groups.

CHIEF SYSTEMS PROGRAMMER

Experience must include systems programming, OS/VS1 and IBM Assembler. In addition VM and PL/I would be advantageous.

SENIOR SYSTEMS PROGRAMMER

Experience of Sysgen and of working in an operating systems environment.

**CHIEF SYSTEMS PROGRAMMER
c. £9,000**

**SENIOR SYSTEMS PROGRAMMER
c. £7,500**

IBM 4341

OS/VS1

VM/CMS

ASSEMBLER

Please telephone (24 hour answer service) or write to apply. Quo Ref: CW154-J

CAPP ASSOCIATES
Computer and Professional Personnel Consultants
01-686 9693 AMP House, Dingwall Road, CROYDON CR8 8XA

The Lockheed glossary of DP terminology

User Friendly (a.) A good way to describe Lockheed's brand new, air-conditioned DP Centre in Riyadh, Saudi Arabia.

Timeslice (u.abc) A two-year assignment with Lockheed.

Checksum (n.) A substantial configuration of digits payable monthly (with six monthly bonuses) during a timeslice (q.v.).

Access (n.e.r.) Strictly limited to experienced Programmer/Analysts.

Password (n.) Typical passwords include COBOL, DOS/VS, CICS and POWER.

Access is dependent on programmer/analyst possessing the right passwords.

Peripherals (n. all.) Closely and functionally related to checksum. Currently, peripherals include free bachelor accommodation, free food and laundry, free medical and life insurance.

Mainframe (n.) LEC Series 3 System, updating, now to IBM 4331.

Downtime (n.) Six downtime periods occur in every timeslice.

Access During downtime, Programmer/Analysts usually return to the UK, and receive free return flights.

Suite (n.all.) Usually applied to an Analyst/Programmer's bachelor accommodation (viz peripherals).

Address, real (n.) The Senior Recruitment Exec.(Lockheed), IAL, Personnel Consultancy, Acro House, Hayes Road, Southall, Middlesex. Quo numeric L294.

Conversational mode (n.) An alternative to address, real. The mode may be entered by phoning 01-5745000.

IAL
LOCKHEED
INTERNATIONAL

**PROGRAMMER/ANALYSTS
PASSPORT
TO SAUDI ARABIA**

SERVICE ENGINEER—UNIQUE

Exeter/Poole Start £8,000 + car

Unique Company — World's fastest growing computer manufacturer — 3-fold increase for the last 4 years — sales now 'taking off' in the U.K.

Unique Product — High cost/performance range — unparalleled MTBF — no duct competition.

Unique Benefits — Ground floor opportunities in U.K. — high reliability, quality engineers — share in the company — training in California — friendly, professional leadership — rapid expansion — opportunities in support, management, sales etc.

Unique Opportunity — Call our service engineer consultants today for details of — Company share scheme, SUPA, N.C. pension; overtime, call-out 2 late car plus £8,000 and more if you have minicomputer experience.

2373

01-509 6441 (0/Day)

04865 3016 (After 2.30pm)

AB EXECUTIVE (KINGSTON) LTD.

DEPARTMENT OF PLANNING AND TRANSPORTATION

ANALYST/PROGRAMMER

(Engineering and Process Control Systems)

Salary within scale £8,636 to £8,007 per annum
(annual pay award pending)

This post is in a team responsible for Urban Traffic Control software and for a range of main frame non-financial applications. The work is a mixture of analysis, programming (Fortran 77 and assembler) and user support. Hardware used includes a large Univac 1100/1, Honeywell mini computer terminals, digitiser and digital plotter.

Relocation expenses up to £1,650 plus lodgings allowance in appropriate circumstances. Temporary housing may be available.

Application forms and further details available from the Director of Planning and Transportation, Matrix Ltd, Glenfield, Leicester LE3 8JL, Telephone 0533 871913, Ext. 7422.

Closing date: Monday, 27th October, 1980.

3043

H 66 HOLLAND

2+ years' Foreign on Honeywell Level 66 equipment (preferably under GCOS) urgently needed by London-based Systems House for important, long-term project in Holland. Relocation offered. Initial interview in London.

c £17K

PDP 11 BASIC

Programmer/Analyst with 2+ years' experience in BASIC required by leading Financial Institution for newly-acquired DEC-based system. Must be self-starter, prepared to work at City and N.E. London offices (possible relocation assistance). c £8K + Mortgage c £ neg.

REAL-TIME MINIS

Programmers, Analysts, System Designers required by UK Software House for numerous real-time projects on minis currently being undertaken in the UK and Holland. Applications for technical/scientific.

MICROS BERKS.

Senior Engineers with 3+ years' micro experience preferably with Electrical/Electronic Engineering degree, wanted for design and development work with UK subsidiary of Micro manufacturer. Of especial interest are experience in firmware development and digital and analogue circuit design.

c £10K

SYSTEMS PROGRAMMER

1-2 years' Systems Software in Assembler on Minis plus CORAL for design, development and providing technical support to Dutch client of Herts-based Mini manufacturer. Degree preferred, ability to work alone effectively essential. Travel to Holland required.

c £8K

Mini & Micro

Holland: Real-Time Systems

An International Systems/Manufacturing Group in Holland is seeking to expand its capabilities by recruiting additional personnel experienced in the mini/micro field. The Company is well established and has a high reputation in the scientific/technical application areas.

The requirement is for Programmers, Analysts, Designers and Consultants. Necessary qualifications for these technically demanding and challenging positions are a background in Mini Assembler or Micro Systems (minimum 2 years) in a non-commercial environment. A relevant degree (e.g. Computer Science, Elec. Engineering or similar) is preferred, although experience in lieu will be taken into account.

Specialist knowledge in any of the following is of particular interest: Message Switching, Process Control, Simulation, Networks, Communications, Banking Systems.

Generous family relocation packages offered plus resettlement advance, 8% holiday bonus, comprehensive medical and pension schemes and house purchase assistance.

Salaries £10-18K

MINIS MIDDX

Analysts/Programmers and Project Leaders wanted for Development Division of leading Mini manufacturer. Assembler and at least one high level language required. Knowledge of interface and Evaluators desirable. Excellent long-term opportunities to £11K

CAD S/W ENG

Software Engineers and Designers with experience in technical and CAD software required. Experience in similar DB/DC required. Urgently sought by East Anglian client. Knowledge of Fortran and Assembler preferred. £8.5K

DB/DC EUROPE

Analysts/Programmers and Designers with experience in DB/DC required. Urgently sought by European offices of International Systems House for development work to £16K

IBM ASSEMBLER

Systems Programmers with 4+ years' experience in IBM and acquaintance with compiler, writing, plus MVS, VS1 or VS2 wanted by advanced Computer manufacturer with UK base in Middx. IMS or other specialist knowledge will be highly rewarded. Relocation where appropriate, overseas opportunities likely to arise.

£6-10K

CORAL RTL 2

Programmers and Programmer/Analysts who have real-time experience gained in a defence, telecomms, or industrial environment required by Systems House. Knowledge to include PDP11, GEC 400 and Micros. Offices are in North Hampshire, occasional overseas travel may be required.

£6-10K

MATRIX

D.O.E. Lic. No. SE(A)4127

10 Grenville Place London SW7 4RW 01 373 3063

to 8.30am 7 days a week

Reward Offered

£7-13K (U.K.) £12-22K (E.E.C.)

We are recruiting for hundreds of companies throughout the UK and EEC requiring Analysts, Programmers, Designers etc. For a comprehensive list of openings complete and send the coupon to: MATRIX LTD, FREEPOST, LONDON SW7 4BR

Name _____
Address _____

Position _____

3043

SOFTWARE ENGINEERS / DESIGNERS £11,000+ HERTS / BEDS.

Our Client, a young and rapidly expanding software house currently require software designers in the scientific and technical fields.

The ideal candidates will have a degree in Computer Science coupled with a sound background with either Mini or Micro experience. Extensive knowledge of Assembler, Cobol and RTL 2 is of paramount importance.

In return we can offer you an attractive benefits package together with an informal, flexible management structure.

SENIOR SOFTWARE PROGRAMMER £9,000+ HERTFORDSHIRE

Our client, one of the world leaders in the field of manufacturing and supplying the Process Industries is currently seeking a Senior Software Standards Programmer to head up their new Software Standards Section.

The ideal candidate will have a degree or equivalent in a computing or engineering discipline together with around five years Software experience some of which shall have been gained in a Standards or Maintenance role. An indepth knowledge of Assembler is highly desirable.

Age is immaterial to a candidate who can show leadership to a team of six as well as being able to give a professional image to visiting clients from both the UK and overseas.

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.. CONTRACTS.. CONTRACTS.. CONTRACTS..

What do contract staff think?

by Chris Lancashire

A RECENT privately-commissioned survey¹ took a new approach to assessing the attitudes, aspirations and agencies of freelance life in the DI field — it asked contentious questions of the contract programmers themselves.

The answers shed quite a bit of light on the delicate relationship balance of dependence, respect and professionalism which evolves between the three parties — the client, the consultancy and the programmer.

And, on the negative side, they reveal some widespread gripes which users and employers of contract staff ignore at their peril. Most important of all, however, is the number of widely-held myths which are exploded by the survey results.

Myth No. 1: contract staff are happy-go-lucky, young, single, here-today-gone-tomorrow.

Wrong. The majority are aged 24 to 32, married, have over five years permanent programming experience and have been contracting for 18

months. More telling still, the majority plan to continue living on their professional reputation doing contract work for the next three to five years.

Myth No. 2: in sites where contract staff are retained, relationships with permanent employees engaged in similar work tend to be strained and cause day-to-day problems.

Wrong. Fewer than one in five of the contract programmers surveyed had experienced such problems.

Myth No. 3: people go on contract for the money.

Right. But not only. Rated almost equally with the financial attractions are a variety of people, places and technical experience, independence and job satisfaction.

Two solutions are seen to this problem.

Many contractors consider it best in the client's interest to speed more time in initial briefing at the start of the assignment so the role is to be performed by the freelancer can be put into its broad context and his particular strengths in related projects highlighted.

The detailed briefing makes even more sense in view of the 75% who claim that client documentation is not adequate, although essential to their rapid productivity.

The other solution to the problem of "overqualified" contract staff lies in the hands of the contractor's capability — better be sure than sorry.

Nonetheless, 50% consider that the clients are insufficiently aware of the specific strengths that each contractor has and, indeed, many believe that there are other tasks needing doing at their sites which they would be better fitted for.

Indeed, it has often been said that the more programming teams you have worked in, the more you realise how few are the differences from year to year or from machine to machine.

Qualifies

Contract programmer as "sage" is inevitably an increasing syndrome therefore and, provided his judgments are delivered with diplomacy and tact, this is perhaps no bad thing.

So if a contractor were marginally to be put in the shoes



There are many myths surrounding contract staff. In a recent survey conducted by the VLI group of contract staff, many of these myths were exploded.

Chris Lancashire, managing director of Computer People North, explains the findings of the survey and points the way to using contract staff more efficiently.

Lancashire joined Computer People North in 1977, which is part of the VLI group. Prior to this he was in selling for Honeywell in the Manchester and Liverpool area with responsibilities for medium and large systems.

DP managers increasingly rely upon contract staff to swell their permanent ranks during times of peak development load and these strong and sound economic factors which make this strategy an appropriate one in the 1980s in my view than ever before.

Value

I believe that those who contract staff, if carefully selected and well-managed, could contribute more to their client installations than they are currently expected or are to do, given a constructive relationship between client, contractor and agency.

I believe this is what contractors think and want and could do nothing but good for data processing in the UK and represent even better value for money for users.

Survey carried out by the VLI group and printed in the VLI house magazine Issue 4.

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(For the above two positions there are also posts for applicants with slightly less experience.)

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Further information and application form may be obtained from Mr. A. O. Bee, Staffing Officer, Building ref. 480, Dept. of Computer Science, University of Aston in Birmingham, Goss's Green, Birmingham B4 7ET. Tel 021-389 3611 Ext. 647 (0386).

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U-E-D

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Lots of PL/1 Vacancies

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We have six MINI computer manufacturing companies with offices in London and Home Counties. Leader with both small and large commercial companies. Locations are the CITY, BROMLEY, BRENTFORD, REDHILL, SLOUGH, SOUTHALL, COCKFOSTERS, WATFORD, BEDFORD, ESHER, CRAWLEY AND MID-KENT. Ring Colston CW 11/4

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You should offer experience selling in the computer industry or be able to demonstrate the personal skills necessary to a sales career.

Vacancies also exist for development staff. You should offer a minimum of eighteen months' working in a commercial environment. While not an essential requirement, our client is particularly interested if you offer experience in Assembler on ICL System 10 hardware.

Male or female candidates should contact Patrick Convey, quoting reference number CW 286.

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Applicants should have good communication skills, maturity to accept full responsibility and the ability to work independently.

Both positions are located at our UK office and it is expected that some travel will be involved.

An appropriate salary will be offered to the successful applicants.

Applications will be treated in the strictest confidence and should be addressed to:—

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(General Manager)**
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A background of real-time programming on minis and microprocessors would be very useful, but primarily we need someone with several years experience in modern software methods and techniques, and who wishes to expand into commercial and managerial areas whilst still pursuing a highly technical career.

The work will involve participation in the development of new business, contact with clients, preparation of proposals and quotations, and leading and working on projects often involving engineers from several disciplines. Projects may include, for example, microprocessor control of machine tools, vehicle navigation systems, satellite communications, image processing, or system software.

Starting salary will be negotiable to £11,000 and we offer a range of additional benefits including profit share, share purchase scheme, and flexible working hours.

Our staff numbers about 150 and the company is situated in pleasant surroundings just north of Cambridge.

If you would like to find out more please contact

Janet Hales, Personnel Officer, Cambridge Consultants Limited, Science Park, Milton Road, Cambridge CB4 4DW, Telephone 0223 358855

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telephone
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The successful candidate will have five years' software programming experience and it will include significant exposure to data communications, database and text handling facilities. The installation will use state of the art technology and appropriate orientation. Training will be given to candidates with suitable practical experience. Forward planning and communications skills are essential.

Salary to £10K plus BUPA, pension scheme, life assurance and four weeks' holiday.

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We are looking for two people to form the systems programming section of our clients new installation. This is to be a 2MB 4341, operating under OS/VS1 and using VM/CMS for on-line programming in PL/I. The company has a household name, and is a member of one of the leading U.K. groups.

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Experience must include systems programming, OS/VS1 and IBM Assembler. In addition VM and PL/I would be advantageous.

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Experience of Sysgen and of working in an operating systems environment.

- CHIEF SYSTEMS PROGRAMMER c. £9,000

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- IBM 4341

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- ASSEMBLER

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If complete artwork is supplied 11 a.m. on a Tuesday Ring: Ray Kelly for further details on 01-261 8016

... because we know you take great pride in performance, and we know that given the RIGHT opportunity you are ambitious enough to want to improve.

Our client is the rapidly growing division of a major multi-national corporation with a yearly turnover in excess of £500 million. The division has been in operation for eighteen months and is responsible for marketing and selling one of the most sophisticated mini-computers available. The product, developed in the United States, has been an outstanding international success, and its U.K. launch has been met by a massive demand. The equipment is ideal for both first time and existing computer users and has been developed to cope with all types of commercial business applications. These include Invoicing, Stock Control, Sales Ledger, Payroll etc. The machine also provides Word Processing and Data Communications facilities.

The first years trading has brought astonishing success and the division, operating from prestigious CENTRAL LONDON premises, now intends to increase its sales force in London and the Home Counties.

To be part of this success story you will already be successfully selling commercial computing systems. You will almost certainly be working for a computer manufacturer but have begun to feel cramped by the lack of career opportunity and inherent bureaucracy. You are seeking an alternative that will allow you to develop your entrepreneurial skills in a growth market, and within an organisation offering ground floor opportunities, high financial rewards, a visible route to the top and realistic and achievable sales targets.

On target earnings will be £16,000 but the real earning potential is in excess of £20,000. You will receive a basic salary of c. £8,000 and be provided with a COMPANY CAR. Additional large company benefits include an attractive Pension Scheme, 4 weeks holiday and usual expenses.

If you think you have the character, presence and drive necessary, contact JOHN WYNTON at Modem to arrange immediate appointment for interview.

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Please send me your 'SALES' Information Package.

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SNR - PROG
BUCKS c £8,500

Move into a company offering development, database, on-line and new hardware. The total package is too attractive to detail — but includes subsidised mortgage, annual bonus, modern offices etc. (NW 1026)

PROJECT LEADER
HERTS c £12,000

A prominent life assurance company embarking on a new development project. The successful applicant will be involved in recruiting his/her systems/programming team. The company is rapidly expanding and offers an outstanding package including relocation. (WA 1083)

ANALYST/PROG
BIRMINGHAM c £8,000+cer

To work for the largest independent computer services company world-wide in assisting and supporting their existing clients. If you have 4-5 years' D.P. experience, prepared to travel throughout Midlands — apply immediately. (WA 1082)

CONTRACTS IMMEDIATE STARTS

Register today as we have a number of clients with immediate vacancies and some who have exclusively given us their forward requirements within the next two months. For your next assignment phone John Sharpe or send your C.V. TODAY.

PROJECT LEADER
W. LONDON c £9,500

This small installation is currently running on-line systems with database. Providing you have good systems experience our client will train where necessary. This position reports directly to the DPM and offers a very attractive employment package. (WA 1076)

SYSTEMS MANAGER
BERKS c £9,500

A small dept. within a friendly, lively company, currently expanding in many market fronts. If you have a programming background, prof. COBOL, are currently a Senior Systems Analyst and looking for your first move into management — this could be the right move for you. (NW 1074)

PROJECT LEADER
BUCKS c £10,000

Project leader or well qualified Senior Analyst looking for career advancement to manage team of 8 Analysts working mainly on financial systems. This company is going through an exciting expansion phase which includes new hardware. (NW 1033)

ANALYST/PROG
HERTS/ESSEX c £9,000

Our client's purchase of new IBM hardware has resulted in their D.P. department's next expansion phase. If you have a COBOL background and 4 yrs. plus experience you can move into the forefront of D.P. (NW 1027)

PROJECT LEADER
CITY to £10,000

Senior Systems Analyst with good all-round experience, pref. on mainframe, required to lead teams of 4/5. Financial applications experience is desirable and Database an asset. (TH 1042)

TEAM LEADER
MIDDX. c £10,000

5 yrs. min. programming exp. including COBOL to lead team of 7 programmers and supervisory role, implementing packaged and bespoke systems for clients. Must have implemented at least one mini or mainframe system from conception. (TH 1047)

CONSULTANT
MIDDX. c £12,000

S & P Experts to operate in advisory and supervisory role, implementing packaged and bespoke systems for clients. Must have implemented at least one mini or mainframe system from conception. (TH 1040)

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Our American clients require a Senior Sales Executive to increase their market penetration by selling their own software package which is already installed in over 1,400 worldwide sites including many prestigious U.K. clients. Grow with this expanding company and command high basic salary and a 2 litre car allowance. (JS 1079)

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Chief Computer Operator

must have been in a supervisory position, are pre-requisite.

Such expertise will allow the man or woman we appoint to take charge of the day-to-day running of the system, control its staffing and implement the procedures governing its use.

It will also mean that the person will enjoy professional and financial rewards which, like our products, are quite outstanding.

For further details, please write to, or telephone Chris Hill, Marconi Avionics Limited, Elstree Way, Borehamwood, Herts. Telephone 01-953 2030 ext 349. Alternatively telephone 01-207 3455 anytime. Please quote Reference No: MA 80/48. (JW 1029)

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Management skills plus 4 years in D.P. Experience of mainframe based systems. Financial package. Credit control, inventories, stocks and control of systems desirable.

ANALYSTS & SENIOR ANALYSTS
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PROGRAMMERS
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SOUTHALL To £8,000
Minimum one year's COBOL experience.

MIDDLESEX To £8,000
Experience should range from one year upwards in COBOL. ASSEMBLER (IBM) or BASIC. Salary according to experience.

FORTRAN PROGRAMMERS
BAYSWATER AREA £4,000 to £8,000
Must be proficient. The higher salaries are for those with post-modifying FORTRAN experience.

If you are interested in any of the above positions, please phone for an application form or write giving full details.

AMES PERSONNEL
Employment Agency Suite 14, Leyton Chancery, 119, Oxford Street, London W1R 1HJ. Tel: 01-514 1104

BOX NOS.
Box No.
c/o Computer Weekly
Great House
Batemford Street
London SE1 9LU

THE SALES BIT

Calculation of redundancy payments

LAST week I wrote about the definition of redundancy, the implications of being offered alternative employment and the implications of redundancy as a result of change of ownership. This week I would like to discuss redundancy payments and how they are calculated, plus a few related points.

Notice Period

It is possible for an employee to leave his job voluntarily during the notice period without losing his rights to redundancy payment, provided he does so with the formal consent of the employer. There is also the right of appeal to the industrial tribunal if the employer's consent is unreasonably withheld.

If, however, an employee is dismissed for misconduct while under notice for redundancy, there is a right of appeal to the tribunal which may grant the redundancy in full, in part, or not at all, according to the circumstances involved.

Industrial disputes do not affect entitlement to payment, but the time spent on strike is not included in determining entitlement to redundancy payment.

Payments

The cost to the employer of making redundancy payments is not as great as the typical employee might believe. The Department of Employment is able to give the employer a rebate of 41% on any redundancy payment made if prior notice of redundancy is given via forms RP1 and RP2.

The scale of compensation for redundancy payments varies according to age-group and operates as follows:

- 1½ weeks' pay for each complete year of employment during which the employee was aged 41 to 64 inclusive for men and 41 to 59 inclusive for women.

- 1 week for each complete year of employment during which the employee was 22 to 40 inclusive.

- ½ week's pay for each complete year in which the employee was aged 18 to 21.

No compensation is payable for a fraction of a year within the age group concerned, but any excess may be added to the age-group below for accumulated reckoning.

The ceiling for the calculation of "one week's pay" is currently £120. Up to January, 1980, the amount was £110.

Minimum

There is, however, a minimum qualification period for redundancy payment of two years' continuous service which comes into effect only after an employee reaches the age of 18. (Happy days!) There is also a maximum redundancy calculation period of 20 years, which means that the maximum redundancy

Puzzle Answer

THE key to a speed solution here is the fact that 1,000,000 equals 10^6 . So, since $10^6 = 2 \times 5$, one thousand equals 2×5^3 . If one thousand equals 2×5^3 , then $2 \times 5^3 \times 10^6 = 2 \times 5^3 \times 10^6$.

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COMPANY: An international group with over 1200 installations in the UK, selling to both new and established commercial and industrial users of all sizes.

CAREER: Real opportunities continually exist for career advancement; over half the present management team were previously salesmen with the company.

COMPENSATION: Sales targets are truly achievable. Last year several salesmen earned in excess of £30,000 and the majority of established salesmen earned over

£20,000 + Company Car

If you are an experienced computer sales executive with either a services or hardware background, we would like to speak with you about job opportunities

Throughout the UK and Overseas

Please contact Jaki Whyte or Alan Williams quoting reference JTC/009.

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The Lockheed glossary of DP terminology

User Friendly (u.) A good way to describe Lockheed's brand new air-conditioned DP Centre in Riyadh, Saudi Arabia.

Timesheet (u.) A two-year assignment with Lockheed.

Cheatsheet (u.) A substantial configuration of digits payable monthly (with six monthly bonus) during a *timesheet* (q.v.).

Access (u.,u.) Strictly limited to experienced Programmer/Analysts.

Password (u.) Typical passwords include COBOL, DOS/VIS, CICS and POWER. Access is dependent on programmer/analyst possessing the right passwords.

Peripherals (u.,all.) Closely and functionally related to *backum*. Currently, peripherals include free bachelor accommodation, free food and laundry, free medical and life insurance.

Mainframe (u.) IEC Series 3 System, updating now to IBM 4331.

Downtime (u.) Six downtime periods occur in every *timesheet*.

During downtime, Programmer/Analysts usually return to the UK, and receive free return flights.

Suite (u.,all.) Usually applied to an Analyst/Programmer's bachelor accommodation (v/z *peripherals*).

Address, real (u.) The Senior Recruitment Exec (Lockheed), IAL, Personnel Consultancy, Aeradio House, Hayes Road, Southall, Middlesex. Quote numeric 1294.

Conversational mode (u.) An alternative to *address, real*. The mode may be entered by phoning 01-5745000.

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— ICL COBOL BACKGROUND PREFERRED

— COMMS AN ASSET

Our client is part of a large, very diverse group located in an attractive part of Surrey, close to the Hampshire Border. They operate a powerful medium range ICL 2900 under DME2 which provides a service to companies within the group.

The D.P. unit is staffed by enthusiastic and competent professionals with an enviable implementation record. The vacancy offers real scope to a sound programmer wishing to develop his career in the systems area at the commencement of an important development phase.

For further details contact Jack Collings on 0273-833848 during the day or 0273-400880 any evening/weekend after 6.30 p.m. Local interviews can be arranged.

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If complete artwork is supplied 11 a.m. on a Friday.
Ring Ray Kelly for further details on 01-261 8016

JBA

MIDLANDS

Territory Manager — Sales

West Midlands Earnings c. £15,000 inc. car Our client is one of the largest British owned computer manufacturers and an acknowledged leader in its field. Their product range and marketing record throughout the U.K., Europe and the Middle East is outstanding. They now require a further TERRITORY MANAGER for their West Midlands marketing branch.

Applicants should ideally possess successful d.p. sales experience but those able to demonstrate sales potential will be considered. Excellent training facilities are provided. Applicants currently resident in the West Midlands will be given preference.

This position offers genuine prospects in a solid, professional company.

Contact: Mike Gaitzsch

Team Leader

Nottingham

An opportunity exists for a Team Leader to work on a number of challenging applications currently under development within the Research Department. The company is well known and respected and has an advanced computer installation comprising main frame and mini computers.

Applicants should have ideally 5 years programming experience and be proficient with FORTRAN, COBOL or Assembler languages in an IBM environment. Familiarity with mini computer applicants development would be desirable but the ability to lead and motivate teams of programmers and analysts is essential.

Contact: Bev Stevens

up to £7,500 + Benefits

Team Leader — Programming

Birmingham £6,500 + car scheme + Benefits

This mini computer systems company, a very effective subsidiary of a prominent and respected group, continues to operate successfully throughout the U.K. They now seek a PROGRAMMING TEAM LEADER for their Birmingham office.

Applicants should have 3 years COBOL experience on any hardware and must either have acted in a supervisory role or have developed sufficiently to be capable of assuming this responsibility.

Conditions of employment are impressive and the benefits considerably enhance the basic salary.

Contact: Mike Gaitzsch

JAMES BAKER ASSOCIATES, International Personnel Consultants, Gateway House, 50 High Street, Birmingham B4 7SY. Tel: 021-643 7885.

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We are a well established mainframe user at an advanced stage of developing a distributed systems network using mini computers. This development now requires the services of a Systems Programmer to develop and support the system software for the mini computer network. We feel that around 3/4 years software experience would be required but we are more concerned with quality of experience than quantity.

If you have background in Operating Systems Support or low level language programming within a communications environment we would be interested to hear from you.

Our computer installation is situated to the West of Birmingham with easy access to the motorway network and City Centre.

A good salary and an excellent package of benefits enhances the genuine career opportunities available.

For an informal yet informative meeting contact our Advising Consultant, or leave the telephone on (01-21) 744 1862 (24 hour answering service) or 021-744 1862 (7-9 evenings and weekends)

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